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BOŻENA CETNAROWSKA

# PASSIVE NOMINALS

IN ENGLISH AND POLISH:

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An Optimality-Theoretic Analysis

Wydawnictwo Uniwersytetu Śląskiego



Katowice 2005



**Passive Nominals  
in English and Polish:  
An Optimality-Theoretic  
Analysis**

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NR 2335

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## Abbreviations

Acc	- accusative case
Adj	- adjective
Ag	- Agent (semantic role)
Agt	- passive agent
CEN	- complex event nominal
D	- determiner
Dat	- dative case
DP	- Determiner Phrase
F	- feminine gender
Fut	- future
Gen	- genitive case
GF	- Grammatical Function
Imper	- imperative
Imperf, impf	- imperfective
impers	- impersonal
Instr	- instrumental case
LCS	- Lexical-Conceptual Structure
LFG	- Lexical-Functional Grammar
Loc	- locative case
M	- masculine gender
N	- noun
N	- neuter gender
Nom	- nominative case
Non-Spec	- non-specifier position
NP	- noun phrase
OBJ	- object

ObjExp	- Object Experiencer
ObjGen	- objective genitive
ObjPoss	- objective possessive
OBL	- oblique grammatical function
OBL <sub>th</sub>	- oblique grammatical function normally assigned to Theme arguments
OED	- Oxford English Dictionary
OT	- Optimality Theory; Optimality-theoretic
PA, PossAdj	- possessive adjective
PassP	- passive participle
Pat	- Patient (semantic role)
Perf, pf	- perfective
PF	- Phonetic Form
Pl	- plural
PN	- personal noun
Poss	- possessive form; possessive suffix
POSS	- possessor grammatical function
PP	- prepositional phrase
PRO	- null pronominal element
r.cl.	- reflexive clitic
Sg	- singular
Spec	- specifier position
SUBJ (= Su)	- subject
SubjExp	- Subject Experiencer
SubjGen	- subjective genitive
SubjPoss	- subjective possessive
VP	- verb phrase

## Preface

This dissertation has two main aims. The first aim is to investigate argument realization in event nominals, focusing on passive nominals. The second aim is to argue for the adequacy of the Optimality-theoretic (henceforth, OT) framework in syntactic studies.

The class of passive nominals encompasses noun phrases headed by deverbal nouns which contain prenominal premodifiers with the “objective” (e.g. Patient/Theme) reading. Objective possessives denote the undergoer rather than the doer of a given state of affairs. They occur in, for instance, the English noun phrases *the kingdom's loss* (i.e. ‘the loss of the kingdom’), *its loss*, *John's murder* or in the Polish phrases *nasze uniewinnienie* ‘our acquittal’, *ich utracenie* ‘their loss’, and *jego zamordowanie* ‘his murder’. Special attention will be paid to the occurrence of pronominal arguments of event nominals in the pre-head and the post-head position (i.e. as possessives and genitives).

This study will have a comparative character. The discussion will be focused on data coming from two typologically distinct languages, namely Polish and English. Moreover, evidence will be considered concerning the behaviour of possessives and genitives in other languages, e.g. Russian, Czech, German, Dutch, Hungarian, Italian, Catalan, and Greek.

The choice of the two languages under scrutiny is not accidental. English is the language whose structure has been investigated most frequently in generative studies (including the studies of passive nominals). The data from English have been employed as a justification for novel theoretical frameworks, such as the framework of Optimality Theory in phonology.



Although there is ample literature concerning deverbal nominals in Polish (reviewed very briefly in Chapter 1 of this dissertation), the occurrence of passive nominals in Polish received relatively little attention. No account has been proposed so far of facts from Polish morphosyntax within the framework of Optimality Theory (while there are several monographs and articles which discuss Polish phonology from the OT perspective). The Polish data are crucial in demonstrating the existence of two types of passive nominals which differ in their syntactic properties. A similar split will be postulated to hold in English.

It will be argued that the framework of Optimality Theory in syntax, with the mechanism of harmonic alignment of prominence scales, is well-suited to model the basic facts concerning the realization of argument structure in passive nominals in Polish and English. The prominence scales which are particularly important for argument linking include the Thematic Role hierarchy, the Definiteness Hierarchy, the Animacy Hierarchy and the Person Scale. Moreover, cross-linguistic differences between principles which determine argument linking in nominals can be translated into different rankings of universal Optimality-theoretic constraints.

The account of passive nominals proposed in this dissertation will incorporate insights stemming from studies of nominals carried out within other versions of the generative paradigm, in particular the framework of the Principles and Parameters model, the Minimalist Program, and Lexical-Functional Grammar.

The outline of the dissertation is as follows. Chapter 1 discusses basic facts concerning restrictions on the occurrence and semantic interpretation of pre-head possessives and post-head genitives in English and Polish noun phrases. An overview will be offered of the existing literature on passive nominals in English and Polish. A contrast will be recognized between two groups of nominals with objective possessives in Polish. They will be referred to as “genuine passive nominals” and “quasi-passive nominals”. Chapter 2 will begin with a brief introduction of the basic assumptions of Optimality Theory. Their application in phonological investigations will be presented. Illustration will be given of Optimality-theoretic studies concerning argument structure of verbs (as investigated by Judith Aissen). Chapter 3 will deal with the parallelism between noun phrases and verb phrases, as well as with the argumental status of prenominal possessives in event nominals. In Chapter 4 some issues relating to the event structure of nominals will be discussed. It will be proposed that “genuine passive” and “quasi-passive nominals” differ in their event structure and in the number of arguments (or participants). In Chapter 5 an attempt will be made to employ the OT mecha-

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nism of aligning prominence scales to predict most optimal argument linking in selected noun phrases. The basic approach proposed in Ais-sen (1999, 2002) will be followed. First, attention will be given to the syntactic realization of Possessors in referential (i.e. non-event) nominals, then in event nominals. In Chapter 6 it will be shown how OT prosodic and syntactic constraints interact in selecting the most felicitous structural realization of pronominal object-type arguments in Polish verbal nominals.



## Noun phrases: Preliminaries

### 1.1. Types of nominals

Since this dissertation considers the structure of selected type of noun phrases (i.e. nominals) in Polish and English, it is useful to mention several divisions of nominals that have been proposed in the literature on the subject. These classifications are based, for instance, on the properties of the heads of noun phrases.

The heads can be either morphologically simple (i.e. nonderived) nouns, e.g. *dog*, *cat*, or derived (especially deverbal) nouns, e.g. *amusement*, *arrival*, *painting*. With respect to English, a distinction is often drawn between “gerundive nominals” and “derived nominals”<sup>1</sup>. The internal structure of gerundive nominals, such as *John's deftly painting your portrait*, resembles closely the structure of verb phrases. Derived nominals, such as *the barbarians' destruction of Rome*, *John's eagerness to please*, exhibit a mixture of verbal and nominal properties.

With respect to Polish, Puzynina (1969) postulates a split between the so-called verbal nouns (“substantiva verbalia”), e.g. *poszukiwanie* ‘search, impf’, *utrącenie* ‘losing, pf’, and deverbal nouns (“substantiva deverbalia”), e.g. *utrata* ‘loss’, *przyjazd* ‘arrival’. The nouns referred to as

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<sup>1</sup> Chomsky (1970) argues for the transformational analysis of gerundive nominals in English, and for the lexical origin of derived nominals. See, for instance, Ruszkiewicz (1997) and Polański (1999) for the discussion of the lexicalist and transformational approaches to nominals. Ruszkiewicz (1997) offers a useful survey of generative approaches to nominalizations (from early sixties until early nineties). Malicka-Kleparska (1988: 84 ff.) compares gerundive nominals and derived nominals in English.

"substantiva verbalia" terminate in the highly productive nominalizing suffix *-nie/-cie*, while "substantiva deverbalia" are nouns derived by means of less productive nominalizing suffixes in Polish, e.g. *rozrywka* 'amusement', *zaślubiny* 'wedding', *sprzedaż* 'sale', *kupno* 'buying', or by means of zero-derivation (conversion), e.g. *przyjazd* 'arrival'. The blend of nominal and verbal properties in Polish verbal nominals (i.e. phrases headed by "substantiva verbalia", as opposed to derived process nominals, headed by "substantiva deverbalia") is discussed at length in Rozwadowska (1995a, 1997)<sup>2</sup>. Verbal nominals preserve overt morphological contrast between the imperfective and perfective aspect. They allow for the presence of the negative prefix *nie-* and the reflexive clitic *się*. They can be modified by adverbs and accusative adjuncts. They also differ in the realization of pronominal internal arguments (as will be shown in the next section).

When we consider the semantics of the head nouns, we can divide them into concrete and abstract nouns (cf. Anderson 1983-1984, Malicka-Kleparska 1988). Malicka-Kleparska (1988) regards abstract nouns as regular nominalizations, and concrete nouns as their irregular lexicalizations. Cetnarowska (1993) proposes that concrete senses of event nominals are supplied by semantic extension rules.

Alternatively, we can divide nouns (as in Rappaport 1998) into two groups: a) material nouns, also referred to as referential nouns (i.e. names of objects, persons) and b) action nouns (i.e. process nouns). The relevant examples from Polish are included in (1):

- (1) a. *kolekcja*      *rzadkich*      *monet* (material noun)  
          collection   rare.GenPl   coins.Gen  
      b. *kolekcjonowanie*   *rzadkich*   *monet* (action noun)  
          collecting.Impf    rare.GenPl   coins.Gen

The division between material and action nouns overlaps with the distinction between result nominals and event nominals, drawn in, among others, Grimshaw (1990), or Zubizarreta (1987). Grimshaw (1990) points out that derived nominals in English are often ambiguous between the result and the event reading<sup>3</sup>, as shown in (2):

<sup>2</sup> Rozwadowska (1995a) puts forward the hypothesis that "substantiva verbalia" in Polish require syntactic derivation while "substantiva deverbalia" call for a lexical derivation. However, this hypothesis is not maintained in her later work (e.g. Rozwadowska 1997), where she argues that event-denoting nouns in Polish form a natural class, no matter whether they terminate in *-nie/-cie* or in less productive suffixes.

<sup>3</sup> Regular polysemy of deverbal nouns (e.g. the ambiguity between the event and the result reading, or the event and the agent reading) is discussed at length in Apresjan (1980: 248 ff.)

- (2) a. The assignment was too long. (result)  
 b. The dean was annoyed by the instructor's assignment of unsolvable problems to undergraduate students. (event)

The same sort of ambiguity can be exemplified for Polish nouns, including both "substantiva verbalia" and "substantiva deverbalia":

- (3) a. wypracowanie nowych metod obrony (event)  
 working-out new.GenPl methods.Gen defense  
 b. twoje wypracowanie 'your composition' (result)
- (4) a. Podobał mi się twój odczyt. (result)  
 liked.3SgM me.Dat r.cl. your.Sg lecture  
 'I liked your lecture'.  
 b. Odczyt licznika gazu zaplanowany jest na wtorek  
 reading meter.Gen gas.Gen planned.PassPNomSgM is on Tuesday  
 'The reading of the gas meter is planned (scheduled) for Tuesday'. (event)

Grimshaw (1990) proposes that result nominals differ from event nominals in their argument realization. Result nominals have no argument structure while event nominals are argument-taking<sup>4</sup>.

Researchers who assume the framework of Parallel Morphology, e.g. Borer (1991), Schoorlemmer (1995), Trugman and Engelhardt (1997), Engelhardt and Trugman (1998), Rozwadowska (1995a, 1997), opt for a syntactic account of the event/result ambiguity of nominals. They assume that a given nominalizing morpheme can be attached to a verb either in the lexical or in the syntactic component. Result nominals are formed in the lexicon. Event nominals are derived syntactically, hence there is a VP constituent in derived nominals with the event reading. This VP constituent is responsible for the inheritance of the verb's argument structure (or theta grid) by the nominal and for the event reading of the nominal.

Rozwadowska (1995a, 1997) postulates that differences in the syntactic properties of Polish verbal nominals (PVNs, e.g. *sprzedawanie* 'selling') and derived process nominals (DPNs, e.g. *sprzedaż* 'sale') follow from distinct syntactic configurations in their underlying representations. Nominalizing suffixes present in PVNs and DPNs are interpreted as elements heading their own projections. The derivation of the surface structure involves head-movement of the verb head to the nominal head (nominalizer) which dominates it. According to Rozwadowska (1997), the abstract nominalizing marker NOM in Polish verbal nominals selects

<sup>4</sup> To be more exact, Grimshaw (1990) assumes that result nominals and simple event nominals have no a(argument)-structure and no event structure.

a VP (Verb Phrase) as its complement. Derived process nominals, in contrast, contain the nominalizer NOM which selects a category-neutral Theta-Phrase. Consequently, DPNs share argument structure with corresponding verbal predicates, though do not exhibit other verbal features (such as the possibility of being modified by adverbs).

In this dissertation no recourse will be taken to distinct routes of deriving event and result nominals. Both types of deverbal nominals will be treated as derived in the lexicon. Event nominals do not contain embedded verbal projections in the syntax but they are associated with an argument structure, which is inherited from corresponding verbs (cf. Grimshaw 1990, Siloni 1997, Cetnarowska 1993).

In the next sections we will consider the semantics of genitives and possessives in English and Polish, and basic facts concerning their syntactic distribution.

## 1.2. Possessives and genitives in English

Elements which modify the head noun, serve as its complements or its arguments will be referred to here jointly as “satellites”. Nominal satellites can either precede or follow the head noun in English, e.g. *John's house*, *the city of Rome*, *Mary's letter*. Other possibilities of modifying the head noun include the use of prenominal adjectives (e.g. *a medical student*), nominal compounds (*dog food*), or prepositional phrase modifiers (as in *the food for animals*). In this section we will be concerned exclusively with the premodifiers with the morpheme 's and with the postmodifying *of*-phrases.

There is no consensus in the literature regarding the terminology to be employed with reference to the constructions in question. They are traditionally referred to as genitives, i.e. Saxon genitives and *of*-genitives (cf. Quirk et al. 1985). Rosenbach (2002) uses the terms “*s*-genitive” and “*of*-genitive”, to refer to, respectively, *John's* in *John's brother*, and *of the house* in *the roof of the house*. Taylor (1996), in contrast, reserves the term “genitive” to postmodifying *of*-phrases in English, and employs the term “possessive” when discussing prenominal modifiers. The general format of the possessive construction is represented in Taylor (1996) as  $[[X \text{ POSS}] Y]$ , where X and Y are noun phrases, and POSS stands for the possessive morpheme (i.e. 's). The  $[X \text{ POSS}]$  constituent is the possessor phrase. X is referred to as the possessor nominal and Y as the possessee in Taylor (1996). Kempson (1977) distinguishes be-

tween the “possessor” and the “possessed”, while Rosenbach (2002) talks about the “possessor” and the “possessionum”.

Rappaport (2002) defines a possessor in English as “a constituent which may (but need not) take the prenominal form used to express possession in its narrowest sense”. In other words, Saxon genitives and pronominal possessive adjectives are typical examples of possessors in English, since they can denote ownership, cf. *Bill's book*, and *his car*. Additionally, postnominal genitive phrases and double genitives are regarded in Rappaport (2002) as possessors when they express a meaning which can be (roughly) rendered by pronominal possessives and Saxon genitives. Compare, in this respect, the postnominal possessors in the phrases *the opera of Verdi* and *the opera of Verdi's* with the prenominal possessor in *Verdi's opera*.

Traditional grammarians offer taxonomies of meanings<sup>5</sup> exhibited by genitives (and possessives). One of those taxonomies was formulated in Poutsma (1914–1916), and is quoted below after Taylor (1996: 6), with appropriate examples of postmodifying genitives added (cf. Quirk et al. 1985 and Huddleston 1984).

- (5) a. genitive of possession: *my brother's books, the earth's crust, the funnel of a ship*;
- b. genitive of origin: *the pheasant's nest, nature's work, Ted's telegram*;
- c. the subjective genitive: *Elizabeth's reign, the horse's breathing, the arrival of the train*;
- d. the objective genitive: *Gordon's murder, their kingdom's loss, the imprisonment of the murderer, love of power*;
- e. the genitive of measure: *an hour's interval, a shilling's worth*;
- f. the genitive of apposition: *Tweed's fair river, treason's charge, the city of Tweed, the news of the team's victory*.

The terms “subjective genitive” and “objective genitive” (or “subjective possessive” and “objective possessive”) imply that the semantic relation between the possessor and the possessee is analogous to the relation obtaining between the subject (or, respectively, the object) of a clause and the verb. The focus of the present study will be on the occurrence of prenominal objective possessives in event nominals, e.g. *Gordon's murder*.

Let us yet mention – for the purpose of comparison – a slightly different classification of meanings of possessors employed in Rappaport (2002)<sup>6</sup> (who discusses both Polish and English possessives). Possessors

<sup>5</sup> See also Polański (1999), de Wit (1997: 112) for more discussion of various types of genitives.

<sup>6</sup> See, among others, Taylor (1996), Nikiforidou (1991), Partee and Borschev (2000), and Trugman (2002) for further analysis of meanings exhibited by pos-



denoting inalienable possession (as in *Mark's nose*), kinship relation (*John's aunt*), and part-whole relation (*the church's tower*) are excluded in (6) from the category of "possession" and included under the meaning of "relation". Moreover, Poustma's genitive of measure (such as *an hour's interval*) is regarded as an instantiation of the sense of "description" in (6).

- (6) a. Possession: *Bill's book, the funnel of a ship*;  
 b. Description: *the cow's milk, this week's event, an absence of ten days*;  
 c. Relation: *Bill's sister, Mark's nose, the earth's interior, the cost of the roof*;  
 d. Subject: *Verdi's opera, Bill's departure, the policy of the president, the life of this dog*;  
 e. Object: *Bill's capture, a portrait of Mona Lisa*.

Kempson (1977) and Williams (1982) regard the possessive construction in English as "semantically incomplete" or "semantically indeterminate". According to Williams (1982), the possessive can denote any pragmatically plausible relation obtaining between the possessor and the possessed. A different position will be taken in this study. Let us note (in agreement with Taylor 1996) that certain types of relations are excluded from the range of the possessive meanings. For example, while the whole-part relation can be denoted by the possessive construction, as in *the car's headlights*, the opposite relation (i.e. part-whole) cannot be encoded, as is shown by the unacceptability of *\*the headlights' car*.

It is frequently stated that English prenominal possessives occupy the determiner slot (cf. Huddleston 1984, Radford 1997, Taylor 1996). As is shown in (7a), possessives cannot co-occur with specifiers, i.e. articles, demonstratives, and quantifiers. Notice that numerals and quantifying adjectives can occur in the "possessee" nominal, as in (7b).

- (7) a. *\*my a child, \*Mary's no brothers*;  
 b. *Mary's many children, my three friends*

The post-head *of*-phrases are often analyzed as complements, e.g. the phrase *of the king* in (8) (cf. Huddleston 1984, Radford 1997, Rosenbach 2002).

- (8) *the daughter of the king*

However, some post-head genitive constructions and prenominal possessives can function as undisputable modifiers. The genitives in the phrases

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possessives and genitives. Nikiforidou (1991) offers to account for the multitude of readings possible with English possessives (or genitives) by analyzing "possession" as the "literal" (i.e. basic) reading of the construction, and by deriving other senses by metaphorical extension, e.g. the participant-event reading in *the train's arrival*.

*a king's daughter* and *the daughter of a king*, i.e. *king's* and *of a king*, denote the type of daughter, instead of specifying a particular referent. Consequently, they are recognized as modifiers in Rosenbach (2002). Taylor (1996) regards the phrases *a king's daughter*, *a boys' school*, or *a driver's licence* as possessive compounds. They resemble regular noun-noun compounds (e.g. *car driver*). The examples below, quoted after Taylor (1996: 3), illustrate the difference in the constituent identification in possessive compounds (in 10) and NPs with prenominal possessives (in 9):

(9) [my driver]'s licence "the licence belonging to my driver"

(10) my [driver's licence] "the licence permitting me to drive"

The phrase *a king of honour* contains a postmodifying genitive which, according to Huddleston (1984) and Rosenbach (2002), should be recognized as yet another type of modifier. It denotes a property (rather than a type) of the head noun<sup>7</sup>. This reading is not available in English with Saxon genitives, e.g. *\*honour's king*. As pointed out in Rappaport (2002), no prenominal possessors correspond to postnominal genitives which instantiate the "quantification" reading (*a bottle of water*, *a pound of flesh*). Some postnominal genitives occur in the "description" sense (e.g. *a book of great importance*) or in the "object" sense (e.g. *the love of power*, *a singer of popular songs*). They cannot be felicitously replaced by prenominal premodifiers (cf. *\*power's love*, *\*great importance's book*). Furthermore, Quirk et al. (1985) observe that there is no premodifying 's genitive available as an alternative for some postmodifying genitive constructions, included by them in the group of subjective genitives, e.g. *the joy of his return* (*\*his return's joy*) and *an angel of a girl* (*\*the/\*a girl's angel*)<sup>8</sup>.

The competition between the synthetic ('s) genitive and the phrasal *of*-genitive is discussed in diachronic terms in Altenberg (1982). Historically, the synthetic genitive was the primary variant, and could either follow or precede the head noun. The *of*-genitive in Old English was restricted mainly to the expression of source or place of origin, e.g. *Jesus of Nazareth*. This usage reflected the original meaning of the preposition *of*, namely '(away) from'. A dramatic decrease in the use of Saxon genitive in Middle English stemmed from the phonological weakening and analogical levelling in nominal paradigms. However, the synthetic *s*-genitive was saved from extinction due to the later rise of the functional differentiation between both types of genitive constructions. This functional dif-

<sup>7</sup> Such postmodifying genitives are excluded from the domain of possessors in Rappaport (2002).

<sup>8</sup> The phrases such as *an angel of a girl*, *a brat of a child*, *a wonder of a play*, referred to in the literature as "binominal NPs", are discussed in, among others, de Wit (1997).

ferentiation coincided with the fixation of word order in noun phrases (as a result of which Saxon genitives became restricted to the premodifying position).

Guidelines concerning the distribution of *s*-genitives and *of*-genitives as markers of possession in present-day English can be found in, among others, Quirk et al. (1985), Huddleston (1984), Hawkins (1981), Anschutz (1997), Rosenbach (2002)<sup>9</sup>, and Biber et al. (1999). Rosenbach (2002), for instance, shows that the type of the possessive relation is important for the genitive variation in English. She concludes that English exhibits the tendency "to encode more prototypical, inherent, and therefore more predictable relations in the more bounded construction" (Rosenbach 2002: 26). This follows from the principle of conceptual distance proposed in Haiman (1985: 106), which states that "the greater the formal distance between X and Y, the greater the conceptual distance between the notions they represent". The prenominal possessive construction is regarded as more bounded in English. Therefore, it is particularly suitable for expressing prototypical possessive relations, such as permanent/legal ownership (*John's car*), body parts (*John's eyes*), part-whole relation (*the car's headlights*), and kinship relations (*my mother*).

Altenberg (1982) and Biber et al. (1999) notice the influence of sociolinguistic factors (such as age, style or dialect variation) on the choice between the two competing constructions. They report that American speakers tend to use the Saxon genitive more frequently than British speakers. The Saxon genitive is more frequent in informal texts and in journalistic writings.

As is remarked in Altenberg (1982), the sequence of nominal satellites in deverbal nominals mirrors the unmarked constituent order in clauses. Subjects of action nominals are typically realized syntactically by prenominal possessors while objects surface as postmodifying *of*-genitives. This is the obligatory interpretation of nominal satellites if the head noun is accompanied by the *'s* genitive and the *of*-genitive, hence the ill-formedness of the phrases *\*the book's reading of John* or *\*the manuscript's removal of Ted* (see, among others, Comrie 1976, Huddleston 1984 and Quirk et al. 1985).

Pronominal subject-type arguments in intransitive nominals are realized as prenominal possessives<sup>10</sup>. When pronominal elements in transi-

<sup>9</sup> Unfortunately, Rosenbach (2002) refrains from discussing the competition between objective genitives and subjective genitives in English deverbal nouns.

<sup>10</sup> Notice, however, that the pronominal single argument of an unaccusative verb occurs in the post-head position in the phrase *the death of him* (brought to attention in Jucker 1993).

tive nominals denote objects of corresponding verbs, they can either follow or precede the head.

- (11) a. their refusal to help us (SubjPoss)  
 b. the rejection of them (ObjGen)  
 c. their rejection (ObjPoss)

The pronominal possessives occurring in the pre-head position are, thus, potentially ambiguous between the subject and object reading when the corresponding verb allows both for the transitive and the intransitive usage, e.g. *their shooting* 'their being shot' or 'their shooting (at something)'.

In the next sections we will review monographs and articles which pay special attention to the occurrence of passive nominals in English, i.e. deverbal nominals with objective possessives. First, however, we will discuss nominal satellites in Polish noun phrases.

### 1.3. Possessives and genitives in Polish noun phrases

Nominal satellites in Polish occur mainly as prenominal possessives, e.g. *moja matka* 'my mother', *babcina chustka* 'grandma's kerchief', and as post-head adnominal genitives, e.g. *dach samochodu* 'the roof of a/the car'. Noun phrases can also contain attributive adjectives and prepositional phrases, e.g. *dziecięce zachowanie* 'childish behaviour', *list do Mary* 'a letter to Mary', but those modifiers will not be discussed here.

The prenominal possessives are often referred to as "possessive adjectives", since, like canonical adjectives, they are inflected for number, person and gender to agree with the head noun. Compare, in this respect, *babcine* 'grandma.PANomPIF' in *babcine chustki* 'grandma's kerchiefs' and *babciną* 'grandma.PAInstrSgF' in *babciną chustką* 'with the grandma's kerchief'.

A comprehensive survey of possessive adjectives in all Slavic languages is offered in Corbett (1987). The majority of West Slavic languages (e.g. Upper Sorbian, Czech, Slovak) and South Slavic languages (e.g. Serbo-Croatian) allow for an extensive use of possessive adjectives (as does Old Church Slavonic). The prenominal possessives are preferred in Slovak to adnominal genitives (e.g. *otcov klobuk* 'father.PA hat', *Janova košel'a* 'Jan.PA shirt'). The main factors which constrain the formation of possessive adjectives include restrictions on number, animacy

and definiteness of the nominal bases, as well as on the presence of attributive modifiers.

The use of possessive adjectives in East Slavic languages is less frequent, especially in Russian. Possessive adjectives are derived in Modern Russian mainly from kinship terms (*mamin* 'mother.PA'), and from personal names (cf. Babynyshev 1997).

Polish, in contrast to other West Slavic languages (but similarly to Russian), exhibits the lowest frequency of use of possessive adjectives (cf. Corbett 1987, and references therein). There exist possessive adjectives derived from Christian names, nouns denoting family relationships, and some names of professions or positions. Most of them contain the possessive suffix *-ow-*, e.g. *Jankowy* 'John.PANomSgM', *ojcowy* 'father.PANomSgM'. The possessive suffix can surface as *-in-* (or its allomorph *-yn-*) in adjectives derived from feminine nouns, such as *babcina* 'grandmother.PANomSgF', *matczyzny* 'mother.PANomSgM'. Examples of prenominal possessive adjectives in Polish nominals are given in, among others, Topolińska (1981, 1984) and Jędrzejko (1993).

Nouns which give rise to possessive adjectives in Polish cannot be accompanied by premodifiers, hence the phrase *jej matczyzna dłoń* 'her mother.PA hand' (which can be paraphrased as 'her hand, i.e. the hand of (someone's) mother') is not the semantic equivalent of the phrase *dłoń jej matki* 'hand her mother.Gen'. The use of the possessive adjectives related to lexical (i.e. non-pronominal) nouns, illustrated above, is diminishing. Many younger speakers of Polish regard *ojcowy* 'father.PANomSgM' or *babcina* 'grandmother.PANomSgF' as obsolete or dialectal forms, and employ the corresponding adnominal genitives.

- (12) a. *Hanczyzna sukienka* (rare)  
       Hanka.PossAdj dress  
       b. *sukienka Hanki* (more common)  
       dress Hanka.Gen
- (13) a. *ojcowe pole* (rare or dialectal)  
       father.PossAdj field  
       b. *pole ojca* (more common)  
       field father.Gen
- (14) a. *dyrektorowe narzekanie* (rare or colloquial)  
       manager.PossAdj complaining  
       b. *narzekanie dyrektora* (more common)  
       complaining manager.Gen

The only possessive forms in Polish which are used productively nowadays are possessive pronouns, e.g. *mój, twój, jego* (cf. Rappaport 2001

for the same conclusion). They are listed in (15) below. The second person pronoun *twój* 'your.Sg' is replaced in some contexts by a more polite form, i.e. the possessive adjective *Pański* 'your.Sg' (derived from the noun *Pan* 'you, Sir'), the genitive form *Pana* 'You.Gen, Sir.Gen', as in *Pana/Pański kapelusz* 'Your.M hat', or the genitive form *Pani* 'You.Gen, Lady.Gen' in *Pani torebka* 'Your.F handbag'.

The table in (15) below, based on similar tables in Witkoś (1998: 148), Franks and King (2000: 150), or Spencer (1991: 367), gives both the tonic (full) and atonic (clitic) forms of Polish pronouns<sup>11</sup>. Polish object pronouns occur in their full forms when they bear some stress, e.g. *jego* 'him.Acc/Gen'. When they are unstressed or bear rhythmic stresses, they occur in morphologically reduced forms, e.g. *go* 'him.cl.Acc/Gen'. Some pronouns exhibit the same form in stressed and unstressed contexts, e.g. *nas* 'us.Acc/Gen', *jej* 'her.Gen/Dat', *ją* 'her.Acc'.

(15) Polish personal pronouns

	Possessive (NomM)	Nominative	Accusative		Genitive		Dative	
			Full	Clitic	Full	Clitic	Full	Clitic
1Sg	mój	ja	mnie	?mię (rare)	mnie	?mię (rare)	mnie	mi
2Sg	twój	ty	ciebie	cię	ciebie	cię	tobie	ci
3SgM	jego	on	jego	go	jego	go	jemu	mu
3SgN	jego	ono	je	je	jego	go	jemu	mu
3SgF	jej	ona	ją	ją	jej	jej	jej	jej
1Pl	nasz	nas	nas	nas	nas	nas	nam	nam
2Pl	wasz	wy	was	was	was	was	wam	wam
3PlM	ich	oni	ich	ich	ich	ich	im	im
3PlN/F	ich	one	je	je	ich	ich	im	im
Refl	swój	-	siebie	się	siebie	się	sobie	se (non-st.)

It is important to note that the third person possessive pronouns are formally identical to the genitive forms of the third person personal pro-

<sup>11</sup> Saloni (1976: 104–118) recognizes the nominative form of *się* and postulates that it occurs in impersonal sentences such as *Szło się cały dzień* 'One walked for the whole day'. I am grateful to Professor Ireneusz Bobrowski for drawing my attention to Saloni's analysis of reflexive pronouns.

nouns. The third person masculine possessive pronoun has the same form as the stressed variant of the genitive/accusative pronoun, i.e. *jego* 'him.Acc/Gen'. For the sake of comparison, let us juxtapose sentences containing the third person possessive pronouns and genitive/accusative forms.

- (16) a. Nie spotkałam jej nigdy.  
not met.1SgF her.Gen never  
'I've never met her'.  
b. To był jej brat.  
this was.3SgM her brother
- (17) a. Jego tu nie było.  
him.Gen here not was.3SgN  
'He was not here'.  
b. Poznałam jego kolegów.  
met.1SgF his friends  
'I met his friends'.

The syncretism between the third person possessives and genitive forms of pronouns is justified on diachronic grounds. There were no possessive adjectives for third person pronouns, hence genitive forms were used as substitutes<sup>12</sup>. Consequently, the third person possessives are not inflected for case, number or gender, e.g. *jej przyjazd* 'her arrival', *przed jej przyjazdem* 'before her arrival', *jej ucieczka* 'her escape'.

The synchronic analysis of pre-head modifiers *jego*, *jej* and *ich* as adnominal genitives is quite common in the literature on Polish pronouns. It is adopted in, among others, Piskarkowa (1969), Saloni (1981), and Gębka-Wolak (2000). According to the above-mentioned authors, the form *ich* 'their, them' should be identified as an adnominal genitive both when occurring in the post-head position, as in the sentence *Piotr widział ich w parku* 'Peter saw them in (the) park', and when occurring in front of the head noun, as in the phrase *ich syn* 'their son'.

Here, however, I will follow Laskowski (1984), Nagórko (1997), and Kiklewicz (1997), and regard *ich*, *jej* and *jego* – when occurring in the phrases *ich syn* 'their son', *jej dziecko* 'her child', *jego córka* 'his daughter' – as possessive forms<sup>13</sup>, which differ from first and second person possessives in being non-inflected.

<sup>12</sup> Incidentally, there is a similar reason for the syncretism between the objective case and the possessive form of the third person feminine pronoun in English (since the form 'her' occupies two slots in the paradigm). Wales (1996: 167) adds that English possessives arose from the original genitive case of personal pronouns.

<sup>13</sup> Strictly speaking, Laskowski (1984) regards the premodifier *jego* in *jego brat* 'his brother' and the genitive pronoun *jego* in *jego widzę* 'Him I see' as two homonymous

There are several arguments which support the latter position. The forms *jego*, *jej* and *ich*, when occurring in non-event nominals, exhibit the syntactic distribution typical of adjectives. They preferably occur in the pre-head position, in front of adjectival modifiers<sup>14</sup>, e.g. *jej największy skarb* 'her greatest treasure', *jego niebieska kurtka* 'his blue jacket'. They can be substituted by adjectival possessives inflected for case, number and gender, cf. *jej syn* 'her son' and *mój syn* 'my son', or *jej dziecko* 'her child' and *moje dziecko* 'my child'. Phrases headed by material nouns are generally unacceptable when they contain an inflected possessive accompanied by an uninflected third person possessive, e.g. \**twoja jej matka* '?your (Sg) her mother'.

The contrast between *jego*, *jej* and *ich* when used as possessives and when used as adnominal genitives is highlighted in the example below, quoted after Laskowski (1984: 281). The presence of the preposition *od* 'from' triggers a change in the shape of the adnominal genitive but is of no consequence to the shape of the possessive.

- (18) a. *od jego domu* 'from his house'  
b. *od niego* 'from him'

It is possible to construct an event nominal which contains *jego* 'him/his' occurring as a possessive and as an adnominal genitive:

- (19) *Jego porównanie jego do słonia rozbawiło mnie na chwilę.* (from Gębka-Wolak 1998: 148)  
'His comparison of him to an elephant amused me for a while'.

Let us illustrate in (20) below, following Rappaport (2002), some of the readings of Polish possessives and genitives.

- (20) a. Possession: *dom Marka* 'Mark's house', *jej książka* 'her book';  
b. Relation: *wieża kościoła* 'the church's tower', *jakość pracy* 'the quality of the work', *ślady wojny* 'the traces of war';  
c. Subject: *słowa ojca* 'father's words', *opera Verdiego* 'Verdi's opera', *rzenie koni* 'the horses' neighing';  
d. Object: *portret chłopca* 'a portrait of a boy', *sprzedaż domu* 'the sale of a house', *szycie sukienek* 'the sewing of dresses'.

lexemes, while here they are treated as forms of the same lexeme. A different view is expressed in Laskowski's entry for the term "possessive pronoun" in Polański (1999: 656), where the possessive pronoun is defined as a contextual variant of the personal pronoun.

<sup>14</sup> Their pre-head position represents a "marked word order", e.g. *działanie jej* 'lit. activity her'.



Rappaport (2002) mentions some groups of adnominal genitives in Polish which have no corresponding prenominal possessors. These include genitives of description, e.g. *dzień odjazdu* 'day of departure' (cf. *\*jego dzień* 'its day'), genitives of quantification, e.g. *szklanka mleka* 'glass of milk' (cf. *\*jego szklanka* 'its glass'), and some object genitives, such as *pragnienie wolności* 'the desire for freedom' (cf. *\*jego pragnienie* 'its desire').

As is shown in, among others, Willim (1995a, 1995b, 1999), Szymańska and Śpiewak (1994), and Rozadowska (1995a, 1995b, 1997), a Polish referential noun can be accompanied by two adnominal genitives. Genitives with the objective reading stand closest to the head noun, and can be followed by the subject genitive or the genitive of possession.

- (21) a. kolekcja                      znaczków                      Piotra  
          collection.Nom    stamps.Gen           Peter.Gen  
          'Peter's collection of stamps'
- b. historia                      filozofii                      Tatarkiewicza  
          history.Nom    philosophy.Gen    Tatarkiewicz.Gen  
          'the history of philosophy by Tatarkiewicz'
- c. obrazy                      Picassa                      Narodowego                      Muzeum  
          paintings.Nom    Picasso.Gen    National.NSgGen    Museum.Gen  
          'the paintings by Picasso that belong to the National Museum'

Each of the right-most adnominal genitives in (21) can be felicitously replaced by a premodifying possessive which denotes the possessor or the creator, as in (22):

- (22) a. moja                      kolekcja                      znaczków  
          my                      collection                      stamps.Gen
- b. jego                      historia                      filozofii  
          his                      history                      philosophy.Gen
- c. nasze                      obrazy                      Picassa  
          our                      paintings                      Picasso.Gen

In the case of event nominals in Polish (discussed in detail in Rozadowska 1997), two adnominal genitives cannot normally co-occur, as is shown in (23a)<sup>15</sup>. If a nominal is related to a transitive verb, the adnominal genitive corresponds to the internal (i.e. object-type) argument, while the external (subject-type) argument may be optionally expressed by the *przez*-phrase, as in (23b).

<sup>15</sup> The apparent exceptions to the constraint against two adnominal genitives are phrases such as *uczenie dzieci matematyki* 'teaching children.Gen mathematics.Gen' (i.e. teaching mathematics to children). As argued in Rappaport (1998, 2002) these phrases involve one "structural" genitive and one "lexical" genitive.

- (23) a. \*zbudowanie      mostu              żołnierzy  
           building.Pf        bridge.Gen       soldiers.Gen  
       b. zbudowanie      mostu              przez    żołnierzy  
           building.Pf        bridge.Gen       by       soldiers

It is worth noting that internal arguments which surface in the adnominal position in Polish nominals can occur in their clitic form. The clitic form is preferred to the full form in the case of the third person singular masculine pronoun, i.e. *go*. In the case of the second person singular pronoun, both the tonic and the atonic form is possible.

- (24) a. oddanie            go            dzieciom  
           giving-back    him.cl.    children.Dat  
           'giving it/him back to (the) children'  
       b. wysłanie    ciebie            na    wakacje  
           sending    you.Sg            on    holiday  
       c. wysłanie    cię                na    wakacje  
           sending    you.Sgcl.        on    holiday

In event nominals related to intransitive verbs the adnominal genitive can exhibit the "subjective" reading, as in (25a). It cannot then surface in a prepositional phrase (cf. 25b):

- (25) a. pływanie      premiera  
           swimming    Prime-Minister.Gen  
       b. \*pływanie    przez    premiera  
           swimming    by        Prime-Minister

A deverbal (or verbal) noun in Polish can be accompanied both by a prenominal possessive and an adnominal genitive, as in (26):

- (26) a. twoja      ocena              wydarzeń  
           your        evaluation        events.Gen  
       b. twoje      czytanie            książek  
           your        reading            books.Gen

If this is the case, the prenominal possessive denotes the agent (subject) and the adnominal genitive requires the object-type reading, as is confirmed by the ill-formedness of the phrase *\*książkowe czytanie ciebie* (instead of *twoje czytanie książek* 'your reading of (the) books').

If there is only a single prenominal possessive accompanying a head noun, it is potentially ambiguous between the objective and subjective reading.

- (27) a. ich kolekcja (= *kolekcja znaczków* or *kolekcja moich braci*)  
       'the collection of them' (= collection of stamps) or 'the collection belonging to them' (= my brothers' collection)  
       b. twój portret 'your portrait' (i.e. the portrait of you or the portrait by you)  
       c. ich lista 'their list' ('a list of them' or 'a list prepared by or belonging to them')  
       d. ich odkrycie 'their discovery' ('the discovery of them' or 'the discovery by them')

In (27d), the ambiguity between the subjective and objective reading of the prenominal possessive is accompanied by the difference between the event reading of the head noun *odkrycie* (in 'the discovery of them') and its result reading (in 'the discovery made by them').

The restrictions on the occurrence of objective possessives in Polish and English passive nominals will be the topic of the following sections.

## 1.4. Passive nominals in English: an overview of the literature

### 1.4.1. The hypothesis of NP movement in passive nominals

The term "passive nominals" is used below – as is usually assumed within the framework of generative grammar – to refer to noun phrases which are headed by deverbal nouns and which require passive sentences as their paraphrases, as in Chomsky's classic example *the city's destruction by the enemy* 'the city was destroyed by the enemy', or the gerundive passive *John's being photographed*.

A slightly different use of the term "passive nominal" occurs in Comrie (1976) and Comrie and Thompson (1985), who regard all action nominals with the agent expressed in a *by*-phrase as passive, e.g. *the destruction of the city by the enemy* as well as *the city's destruction by the enemy*.

Chomsky (1970, 1981), Anderson (1979, 1983–1984), Kayne (1984), and Safir (1987), among others, assume that the passive nominal *the city's destruction by the enemy* is derived by syntactic movement rules from its "active" equivalent, i.e. *the enemy's destruction of the city*<sup>16</sup>.

<sup>16</sup> See Chapter 4 for a brief overview of some criticism of the hypothesis of NP movement in nominals.

The derivation involves the agent-postposing transformation and the NP preposing (i.e. the movement of the internal argument from the post-nominal position to the pre-head position, accompanied by the insertion of the grammatical marker 's). Consequently, there is a trace in the post-nominal position (represented as *e* in 28b).

- (28) a. the destruction [the city]  
 b. [the city]<sub>i</sub>'s destruction [<sub>NP</sub> *e*] by the enemy

Many examples of English passive nominals are provided in Kayne (1984: 137 ff.), including the ones given below:

- (29) a. Everyone is calling for the new law's adoption by the Senate.  
 b. Everyone condemned Kennedy's assassination by Oswald.  
 c. Greenland's colonization by the Danes took place centuries ago.  
 d. Her renewal by the Board was foreordained.  
 e. The microbe's identification by Pasteur led to a major breakthrough.  
 f. Their harrassment by the Secret Service was unjustified.  
 g. How can one not condemn a child's abandonment by its parents?

Anderson (1979, 1983–1984) distinguishes between two types of prepositions occurring in English nominals. "Genuine" prepositions, e.g. *for* in *admiration for the president*, *on* in *reliance on this leader*, or *with* in *accord with Panama*, are subcategorized for by the head noun. The preposition *of*, in contrast, is analyzed as a "dummy" preposition, which is introduced only at the level of surface structure, to repair such phrases as *\*the destruction the city*, or *\*John's envy Mary*. The preposition *of*, like other prepositions, is able to assign case. Consequently, its presence leads to the avoidance of a case filter violation in the nominals *the destruction of the city*, *John's envy of Mary* (cf. Haegeman 1994: 174 for more discussion of the dummy *of*).

Anderson (1979) considers in detail the availability of prenominal possessives with the objective reading in English. She observes that NP complements introduced by genuine prepositions cannot be preposed, since such prepositions cannot be deleted, e.g. *admiration for the president* → *\*the president's admiration for*; *\*the president's admiration*. The dummy preposition *of* can be deleted, or, in other words, it may fail to be inserted.

### 1.4.2. The Affectedness Constraint and the Experiencer Constraint

In order to account for the ill-formedness of such phrases as *\*the history's knowledge*, *\*the event's recollection*, Anderson formulates the so-called Affectedness Constraint. It states that "the objective reading of a possessor is available if it is affected by the action denoted by the derived nominal". She proposes that nominals with affected objects take bare NP complements which must move to the pre-head position in order to receive case, as in *the city's destruction*.

Chomsky (1970), Kayne (1984), Rappaport (1983), Jaeggli (1986) and Zubizarreta (1987) focus on the unacceptability of nominalizations related to verbs denoting emotions:

- (30) a. *\*the stories' amusement of us*  
       b. *\*the class's boredom by the lecturer*  
       c. *\*scarecrow's fright of the children*

The verbs *amuse*, *bore* and *frighten* are often referred to as Object-Experiencer verbs, since the participant with the thematic function of the Experiencer surfaces in the direct object position. The subject position is occupied by the participant with the role of the Experienced (i.e. Stimulus), as in *Her stories always amuse me*. Rappaport (1983) assumes the framework of LFG (Lexical-Functional Grammar). She formulates the Experiencer constraint, which prohibits the Experienced (= Stimulus) argument to occur in the prenominal possessor position. The prenominal position is available only for the Experiencer. The Experienced is mapped on a prepositional phrase, as in *their amusement at the stories*.

Within the Chomskyan framework, Jaeggli (1986) postulates that a predicate X may eliminate its external argument only if X affects its object. The Experienced (= Stimulus) argument is not affected, hence the external (Experiencer) argument is obligatorily present (as a lexical item or PRO) in the verbs *know* and *perceive*. This results in the ill-formedness of the passive nominals *\*the history's knowledge* and *\*the problem's perception*.

Zubizarreta (1987) puts forward the claim that affected objects, in contrast to unaffected objects, are incorporated into the verb (or noun). According to Zubizarreta (1987: 43) and Anderson (1979, 1983–1984), affected objects include Experiencers (as in the case of *John's annoyance*, *Peter's embarrassment*), participants undergoing a change of state or location (e.g. *Mark's arrest*), objects which are being created or recreated (*the building's construction*, *the book's translation*) and, finally,

participants in processes denoting concealment or exposure (e.g. *the knife's concealment by John*, *Alice's exposure of the corruption*).

It is assumed in the literature (e.g. Zubizarreta 1987, Roberts 1987) that the Affectedness Constraint is relevant both to the formation of passive nominals, and to the formation of middles:

- (31) a. His books translate easily.  
 b. the book's translation  
 c. \*This cliff avoids easily.  
 d. \*the cliff's avoidance  
 e. \*the problem's perception  
 f. \*These problems perceive differently from person to person.

The Experiencer Constraint and the Affectedness Constraint are re-analyzed in Rozwadowska (1988) as a single constraint which prevents arguments with the Neutral theta-role from occurring in the pre-head (possessor) position. An argument bears the thematic role Neutral if it has no control over the event and is not affected by it, e.g. *the news* in (32a), *the cliff* in (32b), *the trick* in (32c), or *the history* in (32d).

- (32) a. \*the news' disappointment of the audience  
 b. \*the cliff's avoidance by the hikers  
 c. \*the trick's amusement of John  
 d. \*the history's knowledge

A different explanation for the ill-formedness of noun phrases with prenominal NPs with the Experienced role is proposed in Malicka-Kleparska (1988). She suggests that *-ment* nominalizations in English, including *amusement* and *disappointment*, are derived from passive verbs. Consequently, the prenominal possessive can only denote the Experiencer (i.e. the single argument of the passive verb).

Yet, another account of the Affectedness and Experiencer Constraints has been couched within the framework of Cognitive Grammar. It will be summarized briefly in the next section, since some reference to it will be made in Chapter 5.

### 1.4.3. Possessors as reference points or topics

Within the framework of Cognitive Grammar, Langacker (1993) proposes that possessors should be analyzed as reference points, through

which other entities (i.e. the possesseees) can be uniquely identified. *Mark* in *Mark's car* and *the city* in *the city's destruction* serve as reference points for the possesseees *car* and *destruction*. In other words, the reference point entity (i.e. the possessor nominal) is introduced by the speaker to aid the identification of the target entity (i.e. the possessee).

The postnominal *of*-construction denotes, according to Langacker (1991), an inherent relation between two entities. Therefore, it is often used to introduce complement phrases of relational nouns.

Langacker's analysis is developed in Taylor (1994, 1996), who re-analyzes possessors as highly intrinsic participants in the process. Taylor (1994, 1996) puts forward the following hypothesis:

- (33) "The function of the possessor phrase is to facilitate identification of the head noun's referent by naming an entity that not only has to be topical, and therefore independently accessible to the conceptualizer, but which is also highly informative with respect to the head noun". (Taylor 1996: 253)

Constraints on noun phrases which can occur as possessors (e.g. the impossibility of *\*the history's knowledge*) arise from the fact that not every nominal is a suitable reference point. Taylor (1996) shows that entities which are high in inherent salience make better possessors (i.e. better reference points) than non-salient entities, hence the contrast between *the students' knowledge* and *\*the fact's knowledge*. He argues that possessor nominals must be high in topicworthiness<sup>17</sup>. According to him, "topicworthiness" can be interpreted as "cue validity" of potential reference points, or "the cognitive accessibility of a concept" (Taylor 1996: 18).

When discussing topicworthiness of potential possessors, Taylor (1994, 1996) distinguishes between discourse-conditioned topicality and inherent topicality.

Animate, especially human, entities have higher inherent topicality than inanimate entities. Taylor proposes that human nouns are followed, on the hierarchy of inherent topicality, by human collectives (e.g. *crowd*), gender-specific terms for higher animals (*bull*, *cow*), and names of certain artefacts (*ship*). Names of lower animals (*ant*), objects (*box*) and abstract nouns (*freedom*) come at the bottom of the hierarchy.

Discourse-conditioned topicality is linked to the information structure of utterances. The topic of a sentence (or an utterance) is usually defined as "what the sentence is about", while the rest of the sentence (utterance) constitutes the comment (cf. Junghanns and Zybatow

<sup>17</sup> The observation that possessor NPs often serve as topics (and denote given information) is also made in, among others, Altenberg (1982), Nunes (1993), Anschutz (1997) and Rosenbach (2002).

1997, King 1995)<sup>18</sup>. King (1995), when discussing Russian, distinguishes between “external” topics and “internal” topics. “External” topics introduce a (new) referent in the discourse about which the assertion is made, e.g. *Helen* in *As for Helen, I don't really trust her*. “Internal” topics are usually entities mentioned in the previous discourse, e.g. *she* in the sentences *I met Helen in the supermarket. She looked tired*.

Taylor (1996) observes that possessive phrases typically refer to entities mentioned in the preceding text. They are often definite and pronominal, hence they are good candidates for “continued topics”.

In a similar vein, Rosenbach (2002) asserts that the linearization pattern inside noun phrases is determined by the speaker's preference for placing easily available (i.e. topical, given) information first. She defines a [+topical] possessor as a second-mention, definite expression (e.g. *the man, my brother*). A [-topical] possessor is a first-mention, indefinite expression (e.g. *a man, some boys*). According to Rosenbach (2002), the findings of psycholinguistic research suggest that accessible information (e.g. [+topical] and [+animate] possessors) should occur early in an utterance, hence the preference for the use of *s*-genitives in such instances. Contrary to Taylor (1996), she treats animacy and topicality as separate factors which influence the genitive variation in English. This is also the position taken in the present study (see Chapter 5). It is supported by, among others, the fact that the possessor splits may be induced cross-linguistically either by animacy or topicality.

Informativity is another requirement on the possessor nominal formulated in Taylor (1996). Participants in control of the event (i.e. agents) are usually the most intrinsic and informative participants. However, in the case of psychological predicates (such as *amuse, disappoint*), the Experiencer participant is more informative than the Experienced (= Stimulus) participant. Consequently, the phrase *\*the story's amusement* is ill-formed, in contrast to *the kids' amusement at the story*. Similarly, the nominal *the ambassador* is more informative than *the Prime Minister* in the phrase *the ambassador's dismissal by the Prime Minister*. The subjective reading of the possessor in such phrases as *the ambassador's dismissal*, or *the presi-*

<sup>18</sup> For a thorough discussion of information structure of sentences (referred to also as thematic-rhematic structure, or the functional sentence perspective) in Slavic languages, see Bogusławski (1977) and Huszcha (1980). The assumption that the linear order of constituents is determined mainly by the functional sentence perspective is crucial in the “Meaning  $\Leftrightarrow$  Text” model of language presented in Mel'čuk (1988), and adopted for the analysis of Polish noun phrases in Gębka-Wolak (2000). The aim of the Meaning  $\Leftrightarrow$  Text model is to explain the functioning of a human language as a tool which converts information into a text. Mel'čuk assumes the occurrence of several stages in determining the linear arrangement of constituents of a sentence.



*dent's assassination*, is unlikely since this would result in "the conceptual incompleteness of the situation they denote" (Taylor 1996: 252).

While Taylor's analysis of affected Themes (Patients) and Experiencers as more informative than Agents or Stimuli has some appeal, the notion of informativity remains rather vague. Consequently, in the present study we will prefer accounts which refer to thematic roles of participants in predicting the ill-formedness of *\*the story's amusement* or *\*the cliff's avoidance*.

## 1.5. Passive nominals in Polish

In a comprehensive study of possessive adjectives, Corbett (1987) asserts that prenominal possessives in all Slavic languages can be used to denote Patients (i.e. Objects) of action nominals. He draws such a conclusion on the basis of acceptability judgments provided by his consultants, who were native speakers of various Slavic languages. The following data (provided by Comrie 1976 and Veselovská 1998) confirm Corbett's observations:

- (34) a. tvoe ubijstvo 'your killing' (Russian)  
 b. Husovo upálení 'the burning of Hus' (Czech)  
 c. Evin obraz 'picture of Eve' (also 'the picture by Eve') (Czech)

Corbett (1987) suggests that the range of use of Patient possessives differs cross-linguistically. In some Slavic languages, such as Modern Russian, Polish, Macedonian, Slovenian, or Serbo-Croat, this usage is restricted.

Pađučeva (1984) investigates Russian nominals which contain objective possessives. She observes that inanimate patients frequently appear as possessive pronouns (as in 35a), while the usage of objective possessives denoting animate entities is quite restricted. She admits that she has not been able to find the semantic factor responsible for the well-formedness of pre-head animate Patients in action nominals such as those in (35b), but not in (35c).

- (35) a. Knigi ja poslal, izvestite menja ob ix polučenii.  
 books I sent.3SgM inform.Imper me.Acc about their receipt  
 'I have sent the books; inform me about the receipt of them'.  
 b. On sčitaet svoj arrest protivozakonnym.  
 'He regards his own arrest to be illegal'.

- c. \*On raskaivaetsja v tvoem oskorblenii.  
 he regret.3SgM in your.Sg insult  
 'He regrets having insulted you'.

When discussing Czech, Comrie (1976) points out that, while in principle both the subjective and objective interpretation is available for prenominal and postnominal satellites of nouns, there is a strong tendency for possessives to denote subjects and for adnominal genitives to denote objects, as shown below:

- (36) a. matčina ztráta 'mother's loss' (SubjPoss)  
 b. ztráta matky '(someone's) loss of (self's) mother' (ObjGen)  
 c. tvá ztráta 'your loss' (SubjPoss)  
 d. ztráta tebe '(someone's) loss of you' (ObjGen)

Corbett (1987) reports that his Polish consultants found the use of prenominal possessives with action nominals fairly restricted, and they found the subjective reading to be more readily available than the objective interpretation. Nominal satellites with the objective reading are typically expressed as adnominal genitives.

Felicitous examples of Polish nominals with objective possessives can be found in Rozwadowska (1997). These are nominals derived from a class of psychological predicates, namely Object-Experiencer verbs. The possessive pronouns in (37) denote Experiencers.

- (37) a. twoje zdenerwowanie 'your.Sg nervousness'  
 b. wasze zmęczenie 'your.Pl tiredness'  
 c. ich zdziwienie 'their surprise'

The well-formedness of (37) and the unacceptability of (38) confirm the relevance of Rozwadowska's Neutral constraint (or Rappaport's Experiencer constraint) in Polish. The occurrence of prenominal possessors with the thematic role of Experienced (Stimulus, or Neutral) makes the nominals below unacceptable.

- (38) a. \*ich zmęczenie ciebie 'their making you.Sg tired'  
 b. Oni zmęczyli ciebie.  
 They tired.Pl you.SgAcc  
 c. \*jej zdziwienie was 'her making you.Pl surprised'  
 d. Ona zadziwiła mnie.  
 She surprised.3SgF me.Acc

Rozwadowska (1991) postulates a thematic constraint which prohibits the syntactic realization of non-Experiencer objects by pronominal

possessors in Polish nominals. She adduces the following examples of Polish event nominals which are ill-formed if the prenominal possessive is given the Patient/Theme interpretation (cf. Rozwadowska 1997: 34):

- (39) a. \*twoje pobicie 'your beating' (ObjPoss)  
 b. \*twoja krytyka 'your criticism' (ObjPoss)  
 c. \*twoje zniszczenie 'your destruction' (ObjPoss)

Let us notice that the following nominals appear to violate Rozwadowska's constraint:

- (40) a. nasze aresztowanie 'our arrest (i.e. our being arrested)'  
 b. ich aresztowanie 'their arrest'  
 c. moje odwołanie ze stanowiska dyrektora 'my dismissal from the post of the manager'  
 d. jej odwołanie 'her dismissal (i.e. her being dismissed)'  
 e. wasze uniewinnienie 'your acquittal'  
 f. ich uniewinnienie 'their acquittal (i.e. the acquittal of them)'
- (41) a. jego ulepszanie 'the improving of it/him'  
 b. jej pielęgnowanie 'the nursing of it/her'  
 c. ich odesłanie do rodziców 'the sending of them to (their) parents'  
 d. jego zburzenie 'its destruction/demolishing'

Below it will be argued, as in Cetnarowska (1999b), and Trugman and Cetnarowska (2001), that exceptions to Rozwadowska's constraint against Patient/Theme possessors in Polish verbal nominals fall into two groups. The nominals in (40) and (42) can be referred to as "passive nominals proper" or "genuine passive nominals". There is no restriction on possessive forms occurring here in the pronominal position. These can be either the first, second or third person pronouns, the polite forms *Pański* 'Your.SgPossAdj', and *Pana* 'You.SgGen' as well as the reflexive possessive *swój* 'self's'.

- (42) a. O swoim odwołaniu ze stanowiska wiceministra dowiedziałem się z gazety. 'I learnt from a newspaper about my (lit. self's) dismissal from the post of the deputy minister'.  
 b. Chłopcy cieszyli się ze swojego uniewinnienia. 'The boys rejoiced at their acquittal'.  
 c. Dowiedziałem się o Pańskim aresztowaniu. 'I learnt about Your arrest'.

The nominals illustrated in (41) above, on the other hand, will be regarded here as "pseudo-passive", or "quasi-passive nominals". In Cetnarowska (1999b) I proposed, following some suggestions in Roz-

wadowska (1995b)<sup>19</sup>, that the derivation of “quasi-passive nominals”, e.g. *jej pielęgnowanie* ‘the nursing of it/her’, involved a post-syntactic movement of object pronouns to the pre-head position. I assumed that this movement was motivated by the prosodic behaviour of pronouns. In the present study, however, some arguments against this proposal will be considered and a different way of capturing the difference between the nominals in (40) and (41) above will be outlined.

Let us add that “quasi-passive nominals” are acceptable only with the third person possessive pronouns, and are unacceptable with the first or second person pronoun, or with the reflexive possessive *swój* ‘self’s’.

- (43) a. \*twoje/\*Pańskie ulepszanie ‘the improving of you.Sg/You(polite).Sg’  
 b. \*wasze pielęgnowanie ‘the nursing of you.Pl’  
 c. \*nasze odesłanie do rodziców ‘the sending of us to (our) parents’  
 d. \*moje zniszczenie ‘my destruction’

“Quasi-passive nominals” are attested far more frequently than “genuine passive nominals” in Polish in a careful variety of Polish. Since the third person pronouns allow for inanimate reference, it follows that objective possessives in Polish commonly refer to inanimate entities. Avoidance of ambiguity is another factor responsible for the felicity of inanimate Patients in “quasi-passive nominals” (as is also observed in Koptjevskaja-Tamm 1993: 206). Since inanimate participants are unlikely to bear the semantic role of Agent, the pronoun *jego* ‘his/its’ in the phrase *jego zburzenie* ‘its destruction’ will be correctly interpreted as denoting the Patient/Theme.

The difference between argument linking in “quasi-passive nominals” and “genuine passive nominals” will be discussed at greater length in Chapter 5. Before proposing the details of the analysis, we will introduce the basic principles of the theory adopted in the present monograph, i.e. Optimality Theory.

<sup>19</sup> Rozwadowska (1995b) remarks that the pre-head pronoun *ich* does not seem to be here in the position of the “subject of NP” since it does not bind the anaphor *swój* ‘self’s’.

## CHAPTER 2

# **Introduction to Optimality Theory: Alignment constraints and prominence scales**

### **2.1. Introduction**

This chapter will bring a brief overview of the Optimality-theoretic model which will be applied in the analysis of nominals proposed in Chapter 5 and Chapter 6. In the first part of this chapter (i.e. in section 2.2.) the basic assumptions of Optimality Theory will be presented and some phonological research carried out within this framework will be illustrated. Special attention will be given to alignment constraints that can be employed for the prosodization of atonic Polish pronouns. The second part of the chapter (section 2.3.) will be devoted to the presentation of the Optimality-theoretic research into the field of morphosyntax. A quick survey will be offered of prominence scales proposed in morphosyntactic studies. It will be shown how grammatical hierarchies are aligned in the OT model outlined in A i s s e n (1999), in order to account for the occurrence of passive sentences in English.

<sup>1</sup> Although the term UR (i.e. input) is employed in OT, the distinction between input and output in OT does not correspond directly to the distinction between underlying and surface representations proposed in Chomsky and Halle (1968).

straint \*CODA (to be read as “No-Coda”), which penalizes syllables with codas, and the constraint ONSET, which militates against the occurrence of onsetless syllables.

- (2) a. \*CODA: “Syllables are open”.  
 b. ONSET: “Syllables must have Onset” (cf. Prince and Smolensky 1993, Kager 1999: 93).

Both ONSET and NO-CODA predict that words such as *coda*, *apex*, *connect*, are syllabified as *co.da*, *a.pex*, *co.nnect*, and not as *cod.a*, *ap.ex*, *conn.ect*.

(3)

Input: coda	NO-CODA	ONSET
a. cod.a	*	*
☺ b. co.da		

The winning candidate in the tableau in (3) is indicated by a smiling face, i.e. ☺. It can also be indicated by a pointing finger, i.e. ☞.

In the tableau above NO-CODA and ONSET are unranked with respect to each other, which is indicated by the dashed line between them (in contrast to a regular line indicating strict ranking of the constraints in some tableaux given in the next section). These constraints are satisfied by candidate (b) in (3), which is consequently the winning output<sup>2</sup>. The losing candidate, i.e. candidate (a), incurs one violation of both those constraints (as is indicated by “\*” in the appropriate cells). No evidence is available for ranking NO-CODA below or above ONSET.

The existence of another family of constraints, labelled as “faithfulness constraints”, is postulated within the framework of Correspondence Theory (cf. McCarthy and Prince 1995). Faithfulness constraints compare two representations. There are two types of faithfulness constraints: IO faithfulness constraints (i.e. Input-Output faithfulness constraints) and OO faithfulness constraints (Output-Output faithfulness constraints). IO faithfulness constraints require the identity of the input (i.e. the underlying representation) and the output. They make sure that the output does not diverge too far from the input. DEP-IO constraints penalize epenthesis of segments (or features) while MAX-IO constraints penalize deletion (cf. McCarthy and Prince 1995, Kager 1999: 101 ff.).

<sup>2</sup> It is important to bear in mind that OT constraints refer to surface representations, hence they cannot evaluate some abstract syllabification patterns.

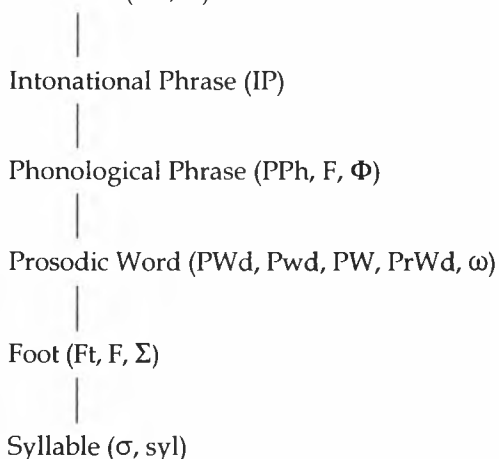
There is yet another family of constraints, which is particularly important for the syntax-phonology interface. These are “alignment constraints”, whose format is discussed in detail in McCarthy and Prince (1993), and applied in Selkirk (1995a, 1995b). Alignment constraints require designated (i.e. left or right) edges of particular (morpho-syntactic or prosodic) categories to coincide. Before presenting alignment constraints, we shall discuss the issue of prosodic domains.

### 2.2.2. Prosodic domains and alignment constraints in OT phonology

Researchers who developed the framework of Prosodic Phonology, including Selkirk (1980, 1984) and Nespor and Vogel (1986), postulated the existence of phonological hierarchical structure, which is motivated by, but not identical to, syntactic structure. This new level of representation, i.e. prosodic structure, mediates between the syntactic and phonological modules of grammar.

The following prosodic categories are recognized in Selkirk (1995a, 1995b). The abbreviations and symbols standing for those categories are given in brackets, as used in, among others, Selkirk (1980, 1995a, 1995b), Kager (1999), or McCarthy and Prince (1993)<sup>3</sup>.

#### (4) Utterance (Utt, U)



<sup>3</sup> Notice, for instance, that McCarthy and Prince (1993) abbreviate the term “Prosodic Word” as “Pwd”, while Selkirk (1995a, 1995b) uses the abbreviation PWd.



Nespor and Vogel (1986) employ a similar hierarchy of prosodic categories, as shown in (5):

- (5) The Prosodic hierarchy (Nespor and Vogel 1986):  
 Phonological Utterance >> Intonational Phrase >> Phonological Phrase >>  
 Clitic Group >> Prosodic Word >> Foot >> Syllable

Prosodic structure domains are defined in Nespor and Vogel (1986) and Selkirk (1995a, 1995b) in relation to syntactic structure. A simple clause typically forms an intonational phrase, i.e. a prosodic domain over which an intonational contour is spread. Two or more intonational phrases make up the prosodic category of an Utterance. A syntactic phrase, e.g. a lexical head with its modifiers, often corresponds to a phonological phrase. A prosodic word is usually identical to a lexical word. The prosodic category labelled as “Clitic Group”<sup>4</sup> in Nespor and Vogel (1986) consists of a lexical word accompanied by an atonic word (i.e. a word devoid of its independent stress), e.g. *for Helen*. Compounds are also analyzed as instances of Clitic Groups.

The prediction that edges of prosodic constituents tend to correspond to edges of morphosyntactic units (lexemes, or phrasal projections) is expressed within the framework of Optimality Theory by means of alignment constraints. These constraints may be violable (to account for the occurrence of occasional mismatches between the syntactic and prosodic constituency). Selkirk (1995a) postulates the Word Alignment Constraints, given in (6) below, to account for the cross-linguistic preference for edges of prosodic domains to correspond to edges of morphosyntactic ones.

- (6) The Word Alignment Constraints (WdCon)  
 a. Align (Lex, L; PWd, L)  
 b. Align (Lex, R; PWd, R)

The constraint in (6a) says that in a well-formed prosodic representation the left edge of **every** lexical word must coincide with the left edge of **some** prosodic word. The constraint in (6b) has basically the same shape, but it enforces the alignment at the right edge. It is necessary to split Align (Lex, PWd)<sup>5</sup> into two constraints, each applying to a different edge, since languages often differ in the degree of enforcing identity of the edges of syntactic and prosodic categories on the left and on the right

<sup>4</sup> The existence of the domain of the Clitic Group is controversial. It is explicitly rejected in Selkirk (1995a, 1995b).

<sup>5</sup> The exact format of the constraint varies among authors (cf. Align-L (Lex, Pwd) in McCarthy and Prince 1993).

side. This may be accounted for by ranking Align-Left above or below Align-Right in a given language.

McCarthy and Prince (1993) note that alignment constraints are not symmetrical, i.e. the WdCon constraints in (6) are distinct from the constraints in (7) below, referred to as PWdCon in Selkirk (1995a).

(7) The Prosodic Word Alignment Constraints (PWdCon)

- a. Align (PWd, L; Lex, L)
- b. Align (PWd, R; Lex, R)

Align (Lex, L; PWd, L) in (6) requires the left edge of **every** lexical word to correspond to the left edge of **some** prosodic word. Consequently, this constraint is not violated if there are some PWds whose left edges are not aligned with the left edges of lexical words. Such a configuration would be prohibited by Align (PWd, L; Lex, L) in (7), which states that the left edge of **every** prosodic word must coincide with the edge of **some** lexical word.

Selkirk (1995a) postulates also constraints which align larger prosodic and syntactic domains. The constraints in (8), for instance, state that the right (or respectively left) edge of any maximal syntactic phrase projected from a Lex (i.e. Lex<sup>max</sup>) must coincide with the right (or left) edge of some phonological phrase. In English the constraint matching the right edges of Lex<sup>max</sup> and PPh appears to be top ranked (cf. Selkirk 1995a: 456).

- (8) a. Align (Lex<sup>max</sup>, R; PPh, R)  
 b. Align (Lex<sup>max</sup>, L; PPh, L)

Consequently, it is predicted that the noun phrase *a large bottle*, projected from the Lex *bottle*, should have its edges aligned with the prosodic constituent<sup>6</sup>, i.e. PPh.

### 2.2.3. Alignment constraints and the prosodization of Polish pronouns

Alignment constraints can be further employed to reflect the correspondence between the edges of larger and smaller prosodic domains,

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<sup>6</sup> See, however, the algorithm of PPh formation proposed by Nespor and Vogel (1986), which predicts that branching complements should not be included in the same phonological phrase as their heads.

e.g. the edges of feet and prosodic words (see McCarthy and Prince 1993, or Selkirk 1995a, 1995b for more discussion).

We will demonstrate that the operations of such constraints are crucial in determining the prosodization of non-lexical words, such as pronouns, in Polish.

With respect to Polish pronouns, it is commonly observed (see, among others, Dłuska 1976[1947], Kraska-Szlenk 1995) that morphologically reduced pronouns (e.g. *mu* 'him.Dat', *go* 'him.Acc/Gen') show the behaviour of phonological enclitics. They cannot occur post-pausally, since they need a host in front of them. Non-reduced (i.e. full/tonic) forms must be used in the post-pausal position.

- (9) a. \*Go        wczoraj    tu        nie        widziałam.  
          him.cl. yesterday here not        saw.1SgF  
       b. Jego        wczoraj    tu        nie        widziałam.  
          him        yesterday here not        saw.1SgF

Reduced pronouns in Polish are also avoided in the prepausal position in careful (i.e. literary) variety of Polish<sup>7</sup>. This is the reason why sentence (10a) is regarded as infelicitous in literary Polish, as is shown by the exclamation mark '!'. Careful speakers would pronounce either (10b) or (10c), instead of (10a).

- (10) a. !Marek        dziś        widział        go.  
          Mark        today        saw.3SgM        him.Acc  
       b. Marek        dziś        go                widział.  
          Mark        today        him.Acc        saw.3SgM  
       c. Marek        go                dziś        widział.  
          Mark        him.Acc        today        saw.3SgM

Within the Optimality-theoretic framework, the avoidance of morphologically reduced pronouns in accentually prominent positions can be captured by means of a constraint which aligns the edges of a large prosodic domain with the edges of a foot. For instance, Cetnarowska (2001a) proposes that the infelicity of (10a) follows from the violation of the constraints A1-R(PPh, Ft) and A1-R(IntP, Ft)<sup>8</sup>. These constraints are formulated in (11a) and (11b) below. One more constraint which is cru-

<sup>7</sup> This is also true of unstressed "double duty" pronouns, e.g. *jej* 'her.Acc/Gen/Dat', *nas* 'us.Acc/Gen', or *was* 'you.PIAcc/Gen' (which are discussed in Franks and King 2000).

<sup>8</sup> See Kraska-Szlenk (1995) for a different set of OT constraints postulated to prosodize Polish pronouns.

cial for evaluating prosodization patterns in Polish (as well as in other languages) is Parse  $\sigma$ . It is formulated in (11c), following, among others, Prince and Smolensky (1993). Parse  $\sigma$  penalizes the occurrence of syllables which do not form part of a (preferably disyllabic) foot.

- (11) a. Al-R(PPh, Ft)  
The right edge of each phonological phrase corresponds to the right edge of some foot.
- b. Al-R (IntP, Ft)  
The right edge of each intonational phrase corresponds to the right edge of some foot.
- c. Parse  $\sigma$ : Syllables must be parsed.

The difference in the prosodization of (10a) and (10b) is shown in (12a) and (12b) below. Notice that 1 indicates a stressed syllable, 0 – an unstressed syllable, and round brackets represent the division into (preferably) binary feet. PPh stands for “phonological phrase”, and IntP for “intonational phrase”.

- (12) a. [ [ (1 0) ]<sub>PPh</sub> [ (1) (1 0) 0 ]<sub>PPh</sub> ]<sub>IntP</sub>  
b. [ [ (1 0) ]<sub>PPh</sub> [ (1 0) (1 0) ]<sub>PPh</sub> ]<sub>IntP</sub>

In (12a), which corresponds to (10a), the final 0 represents the unstressed monosyllabic pronoun *go* ‘him.Acc/Gen’. This syllable is unfooted (i.e. it does not belong to the preceding binary foot), and it occurs both at the end of the Phonological Phrase (constituted by the sequence *dziś widział go*) and at the end of the Intonational Phrase (which includes the whole sentence). This incurs a violation of Parse, Al-R(IntP, Ft) as well as of Al-R(PPh, Ft), as is illustrated below<sup>9</sup>:

(13)

	Al-R(IntP, Ft)	Al-R (PPh, Ft)	Parse $\sigma$
dziś widział go [(1) (1 0) 0] <sub>PPh</sub> ] <sub>IntP</sub>	*	*	*

The prosodization of (10a), given in (12b), is more felicitous, since the reduced pronoun *go* ‘him.Acc/Gen’ corresponds to an unstressed but

<sup>9</sup> To simplify the tableau, we omit the initial disyllabic subject noun *Marek* ‘Mark’ in the prosodizations given in (13) and (14). We also neglect the existence of other constraints relevant for Polish stress (e.g. the requirements that feet should be trochaic and disyllabic).

footed syllable. It is included into the syllable headed by the stressed monosyllabic word *dziś* ‘today’. There is no unfooted syllable at the end of the PPh or IntP, hence neither of the constraints in (11) is violated. This is shown in (14) below:

(14)

	AI-R(IntP, Ft)	AI-R (PPh, Ft)	Parse $\sigma$
dziś go widział [(1 0) (1 0)] <sub>PPh</sub> ] <sub>IntP</sub>			

2.2.4. Harmonic alignment in phonology

The mechanism of harmonic alignment has been postulated in Prince and Smolensky (1993).

- (15) "Suppose given a binary dimension  $D_1$  with a scale  $X > Y$  on its elements  $\{X, Y\}$ , and another dimension  $D_2$  with a scale  $a > b > \dots > z$  on its own elements. The *harmonic alignment* of  $D_1$  and  $D_2$  is the pair of Harmony scales:  
 $H_X$ :  $X/a \ X/b \ \dots \ X/z$  [more harmonic  $\dots$  less harmonic]  
 $H_Y$ :  $Y/z \ \dots \ Y/b \ Y/a$   
The *constraint alignment* is the pair of constraint hierarchies:  
 $C_X$ :  $*X/z \gg \dots \gg *X/b \gg *X/a$  [more marked  $\gg \dots \gg$  less marked]  
 $C_Y$ :  $*Y/a \gg *Y/b \gg \dots \gg *Y/z$ " (from Prince and Smolensky 1993: 136)

Prince and Smolensky (1993) employ this mechanism in phonology, e.g. to account for the preference of particular type of segments to occur as syllable margins or syllable nuclei (peaks). Correct predictions regarding those preferences are made if the scale of positional prominence is aligned with the Sonority Hierarchy. Vowels make the best (i.e. least marked) syllable peaks, while obstruents are best in the margin of the syllable.

- (16) a. Syllable Position Scale: Peak > Margin  
b. Sonority Scale: Vowel > Sonorant > Obstruent  
c. Harmony scales:  
i. Peak/Vowel > Peak/Sonorant > Peak/Obstruent  
ii. Margin/Obstruent > Margin/Sonorant > Margin/Vowel

These harmony scales can be translated into constraints which penalize less harmonic associations of elements from the Syllable Position Scale

and the Sonority Scale, e.g. \*Peak/Obstruent (which can be read as “Do not have an obstruent as the peak of a syllable”), or \*Margin/Vowel (i.e. “Do not have a vowel occurring in the margin of a syllable”). The constraint prohibiting the most non-harmonic association of items from two scales (e.g. \*Peak/Obstruent) is ranked higher than the constraint which prohibits slightly less imperfect association (e.g. \*Peak/Sonorant).

(17) Constraint hierarchies:

$C_X$ : \*Peak/Obstruent >> \*Peak/Sonorant >> \*Peak/Vowel

$C_Y$ : \*Margin/Vowel >> \*Margin/Sonorant >> \*Margin/Obstruent

In the next section it will be shown how Optimality Theory can be employed in syntax.

## 2.3. Introduction to Optimality-theoretic syntax

### 2.3.1. Preliminaries

While Optimality Theory has been well grounded in phonology, the research in syntax carried out within this framework is less substantial (though see the papers in Beckman et al. 1995, Barbosa et al. 1998, Legendre et al. 2001, Dekkers et al. 2000). Many points remain controversial in OT syntax, e.g. those concerning the nature of the input.

Anderson’s work on clitics (e.g. Anderson 1996, 2000) has had a crucial impact on the development of OT syntax. Anderson views clitics as phrasal affixes. He asserts that they are not present in the syntax as independent lexical items but as morphosyntactic features, which are spelt out in the Phonetic Form. The insights from Anderson’s theory have been adopted in, among others, Legendre (2000) for the analysis of Bulgarian clitics and in Gerlach (2001) for the discussion of clitic phenomena in Romance languages.

Polish reduced pronouns, however, do not display the typical behaviour of syntactically deficient elements. Franks and King (2000) compare the distribution of Polish object pronouns and pronominal object clitics in Czech and Slovak. While Czech and Slovak clitics cling to the second position in a clause, morphologically reduced object pronouns

in Polish show considerable mobility<sup>10</sup>. They cannot occur in the sentence-initial position, and are avoided sentence-finally, but these restrictions on their distribution can be accounted for by means of prosodic constraints (as was shown in the previous sections). Polish pronouns are able to support auxiliary clitics, i.e. verbal person-number markers such as *-śmy* in *Wczoraj go+śmy spotkali w kinie* 'lit. yesterday him+ 1Pl met in (the) cinema' (see Franks and Bański 1999 for more discussion). In contrast to Romance clitics (as discussed in Gerlach 2001), combinations of reduced pronouns in Polish do not maintain a strict internal order and they do not involve any morphophonological "readjustment" (cf. Rothstein 1993, Cetnarowska 2003). In conclusion, the status of Polish object pronouns as phrasal affixes is doubtful.

Moreover, while Anderson's approach accounts satisfactorily for the distribution of second position clitics in a clause (or an Intonational Phrase), it cannot deal with the competition between alternative syntactic realizations of a particular argument structure, e.g. the choice between the pattern [Possessive + Head Noun] and [Head Noun + Genitive]. Therefore, instead of employing Anderson's approach to predict the position of pronominal arguments in Polish nominals, I will base the account proposed here on Aissen's theory of harmonic alignment of grammatical hierarchies (i.e. prominence scales in syntax).

### 2.3.2. Grammatical hierarchies

Grammatical hierarchies have been widely employed in typological and functional literature (e.g. in Greenberg 1966 or Givón 1976) in order to account for patterns of cross-linguistic variation. These hierarchies are viewed in Croft (1990) as extensions of markedness patterns<sup>11</sup>. Various types of criteria (discussed in detail in Greenberg 1966 and Croft 1990) are proposed in the literature to provide support for a particular markedness relationship. These include, among others, the frequency criterion, the neutral-value criterion, the behavioural criterion

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<sup>10</sup> Witkoś (1998) offers an in-depth study of the syntactic behaviour of Polish personal pronouns. He observes that, when occurring post-verbally, reduced pronouns must be adjacent to the verb. Consequently, he regards them as heads of functional projections which are associated with verbs.

<sup>11</sup> As observed in Croft (1990), the recognition of grammatical hierarchies is compatible with the relative approach to markedness (which contrasts with the classical binary approach to markedness, advocated for by the Prague School linguists).

(which can be split into the inflectional and the distributional subcriteria) and the structural criterion.

The frequency criterion can be construed as applying either to textual frequency or cross-linguistic frequency. It states that the less marked values of a particular category will occur in a given text sample (or a given sample of languages) at least as frequently as the more marked values. By virtue of the neutral-value criterion, members of a given opposition which occur in the positions of neutralization should be regarded as unmarked. The inflectional behavioural criterion says that the less marked value is expected to have more distinct forms in the inflectional paradigm than the more marked value(s). Cases of syncretisms are more common in the case of marked values, while the greater allomorphy is typical of unmarked values for a particular category. The distributional behavioural criterion predicts that the unmarked (or less marked) category can be found in a greater number of constructions (or contexts) than the more marked categories.

For instance, with respect to the category of number, the evidence from syntax and morphology can be provided to show that the singular number is less marked than plural, dual or trial. The more marked category (i.e. plural) is expressed in some languages (including English) by more morphemes than the less marked category, e.g. *cat+s* and *cat* (cf. the structural criterion of markedness). Furthermore, the singular number occurs in a greater number of constructions than the plural number (cf. the behavioural and the frequency criterion). In positions of neutralizations the singular number is more likely to occur (e.g. in the Polish question *Kto znał odpowiedź?* 'Who knew (Sg) (the) answer (Acc.)' the pronoun *kto* 'who' is interpreted as singular). Finally, there are very few languages which employ the value "trial" or "paucal" for number (where "trial" denotes three objects and "paucal" implies few representatives).

There are some more languages which distinguish between dual, plural and singular number. In many languages nouns are inflected to make a distinction between singular and plural number. This suggests that the value "singular" is unmarked, while "plural" is less marked than "dual" and "trial"/"paucal", which is represented by the sign "<" in (18a). In the Optimality-theoretic literature a slightly different convention is adopted, shown in (18b). Elements on a grammatical hierarchy are followed by the symbol ">". This implies that a given value is higher on the prominence scale than the immediately following value, e.g. the singular number is higher on the scale than the plural number. The format of the prominence hierarchies in (18b) will be adopted in the present dissertation.



## (18) Number Hierarchy

- a. singular < plural < dual < trial/paucal (where < means “less marked than”)
- b. singular > plural > dual > trial/paucal (where > means “is higher on the scale than”)

The Number Hierarchy given above is interpreted, in the typological approaches, as denoting a chain of implicational universals. It predicts that languages which have trial (or paucal) number will also have dual, plural and singular forms. The existence of the dual number implies the occurrence of plural and singular forms. The hierarchy implies the impossibility of languages which have dual forms but lack plural or singular forms.

Several grammatical hierarchies, apart from the Number Hierarchy, have been postulated in the literature. They include, among others, the Person Hierarchy, NP-type Hierarchy, the Definiteness Hierarchy, the Grammatical Relations Hierarchy, the Animacy Hierarchy and the Thematic Hierarchy (i.e. the Semantic Role Scale), which are given below<sup>12</sup>.

(19) a. Person Hierarchy: 1<sup>st</sup>/2<sup>nd</sup> (= Local) person > 3<sup>rd</sup> person

- b. The Definiteness Hierarchy: Definite > referential indefinite > nonreferential indefinite
- c. The NP-type Hierarchy: pronouns > common nouns
- d. The Grammatical Relations Hierarchy: subject > object > oblique
- e. The Animacy Hierarchy: human > animate > inanimate
- f. The Semantic Role Hierarchy: Agent > Beneficiary > Experiencer/Goal > Instrument > Patient/Theme > Locative

Evidence for each of those hierarchies is examined in detail in, for instance, Greenberg (1966), Givón (1976), Silverstein (1976), Dixon (1979), Croft (1990), Haspelmath (2001), Aissen (1999, 2000), and Dingare (2001). It is useful to review this evidence very briefly to refute the claim, made by some critics of Optimality-theoretic syntax (e.g. Newmeyer 2000), that syntactic prominence scales lack sufficient justification.

Givón (1976) argues that the first and second persons are the most presupposed arguments in a discourse. While the first and second persons are referred to as “local persons”, the third person can be dubbed as “non-local”. Kuno (1987) assumes that the Person Hierarchy reflects

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<sup>12</sup> Most of those hierarchies are quoted from Croft (1990). Notice, however, that the connective ‘>’ is used here to mean “is higher on the scale than” (while Croft employs the connective ‘<’ which means “is less marked than”).

the degree of empathy, i.e. the identification of the speaker with an event participant<sup>13</sup>. Croft (1990) remarks that there are more distinctions found in the first and second person pronouns than in the third person pronouns (e.g. the distinction between the “inclusive” and the “exclusive” reading of the first person plural pronoun)<sup>14</sup>.

The difference between local and non-local persons may also be relevant for ergativity splits. Silverstein (1976) notes a relationship between the Person Scale and the split-ergative case marking in Dyrbal. Third person pronouns in Dyrbal are case-marked overtly if they are subjects of transitive clauses, and require no overt case marking when occurring as subjects of intransitive clauses or objects. In contrast, first and second person pronouns are case-marked as objects and unmarked as subjects of transitive clauses. In Georgian the third person arguments can have the ergative case while the first/second person arguments have the nominative case even when both arguments are associated with the same thematic slot of the verb (cf. Manzini and Savoia 1997<sup>15</sup>). In some Central and Southern Italian dialects (e.g. the dialect of Amandola), there is an alternation between the auxiliary verb *essere* ‘to be’ in the first/second person forms and the auxiliary verb *avere* ‘to have’ in the third person forms in the paradigm of the present perfect tense.

The animacy of participants is crucial in some languages for word order of constituents and for their grammatical function. In Navajo the higher-animacy arguments precede lower-animacy arguments. In Jakaltek inanimate participants cannot occur as subjects of transitive clauses (cf. Aissen 2000, Croft 1990).

The fact that English pronouns exhibit more inflectional forms than non-personal nouns (e.g. *I/me, he/him*) can be interpreted as evidence for

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<sup>13</sup> The empathy scale which is employed within the framework of cognitive grammar (e.g. in Langacker 1991 or Kardela 2000) can be regarded as a combination of the Person Hierarchy with the Animacy Scale:

(i) speaker > hearer > human > animal > physical object > abstract entity (cf. Kardela 2000: 179)

<sup>14</sup> As a matter of fact, Greenberg (1966) regarded the third person pronouns as less marked than the first or second person pronouns. The evidence adduced in Greenberg (1966) involved the facts from verb agreement and the frequency of occurrence counts for the first, second and third person pronouns.

<sup>15</sup> Manzini and Savoia (1997) interpret the ergativity split between the first/second and third person as a difference in the feature specification of clitics. First/second person clitics are specified for two features: P(erson) and the categorial feature D. Third person pronouns lack the specification for the feature P and have only the feature D (where D stands for the specification of definiteness or indefiniteness).

the NP-type Hierarchy (see Croft 1990). The NP-type Hierarchy, the Definiteness Hierarchy and the Animacy Hierarchy are all relevant cross-linguistically for overt case marking of direct objects. This matter is discussed in greater detail in Silverstein (1976), Croft (1990) and Aissen (2000). They show that in Spanish the direct object takes a case marker when it is referential definite but requires no marker when it is referential indefinite. The term “referential indefinite” stands for a specific individual, unknown to the hearer. Similarly, object case marking in Hebrew is restricted to definite objects. In Punjabi higher-animacy objects require an overt case marker while inanimate objects need not be case-marked. In Romanian, object case marking is obligatory for animate-referring personal pronouns and proper nouns.

Some researchers (including Silverstein 1976 and Aissen 2000) incorporate the NP type hierarchy into the Definiteness Hierarchy<sup>16</sup>, as shown below:

(20) The Definiteness Scale (extended):

Personal pronoun > Proper noun > Definite NP > Indefinite specific NP > Non-specific NP (from Aissen 2000: 2)

The position of a given element on the Definiteness Scale depends on “the extent to which the value assigned to the discourse referent introduced by the noun phrase is fixed” (Aissen 2000: 7).

Other researchers, e.g. Dixon (1979), combine the NP type Hierarchy and the Person Scale with the Animacy Hierarchy:

(21) Animacy Hierarchy (the extended version, Dixon 1979):

1<sup>st</sup>/2<sup>nd</sup> person pronouns > 3<sup>rd</sup> person pronouns > proper names > human common nouns > nonhuman common nouns > inanimate common nouns

Grammatical relations, corresponding to the traditional notions of Subject, Direct Object, Indirect Object, etc., are regarded as universal primitives<sup>17</sup> in functional grammar (e.g. Givón 1976), in earlier versions of Lexical Functional Grammar<sup>18</sup> (e.g. Bresnan and Kanerva 1992)

<sup>16</sup> In a similar vein, Ariel (1990) arranges referring expressions on a scale of accessibility of the mental representation of discourse referents. She argues that pronouns have high accessibility to the addressee while indefinite NPs have low accessibility.

<sup>17</sup> Van Valin and LaPolla (1997: 274) outline an alternative model in which they allow some languages to lack grammatical relations.

<sup>18</sup> In the revised versions of LFG grammatical functions are decomposed into sets of features (see Chapter 5 or Laczko 1995 for more discussion).

or cognitive grammar (e.g. Langacker 1991, Kardela 2000). They are referred to as “grammatical functions” (GFs) by the advocates of LFG. Within the consecutive versions of the model(s) of grammar developed by Noam Chomsky, grammatical relations are derived from arboreal configurations (i.e. from syntactic constituency).

Croft (1990) argues that the importance of the Grammatical Relations (GR) Hierarchy can be exemplified by its influence on the cross-linguistic behaviour of relative clauses. In English the noun phrase is accessible to relativization when it functions as a subject (*the boy who hit me*), direct object (*the man that I met*), indirect object (*the woman that I sent the flowers to*) or an oblique element (*the boy that I went to a party with*). In some other languages only NPs which are high on the GR Hierarchy can be relativized.

The Semantic Role Hierarchy, also referred to as the Thematic Role Hierarchy, has been widely employed by scholars who espouse various theoretical frameworks. Cross-linguistic evidence has been adduced for the association of semantic roles with grammatical relations (e.g. Dixon 1979, Bresnan and Kanerva 1992, Jackendoff 1972). This evidence includes, among others, subject-selection principles. Jackendoff (1972) observes that an argument with the role of Agent is typically selected as the subject of an active sentence in English, e.g. *John* in the sentence *John* (Ag) *opened the door* (Theme) *with the key* (Instrument). If no Agent is overtly expressed in an active clause, but there are arguments bearing the roles of Instrument and Theme, the NP with the role of Instrument will be selected as the subject, e.g. *The key* (Ins) *opened the door* (Theme). The Theme will appear in the subject position typically when the Instrument and the Agent remain unexpressed overtly, cf. *The door* (Theme) *opened*.

Bresnan and Kanerva (1992) compare generalizations which concern the canonical (i.e. unmarked) grammatical encoding of thematic roles in ergative and nominative-accusative languages. In syntactically nominative-accusative systems the Theme is typically associated with the grammatical function of Object, whereas in syntactically ergative languages it is aligned with the function of Subject. The Agent is canonically coded as Subject (in nominative-accusative systems) or as an oblique element.

Jackendoff (1972) argues that the control of null subjects in purpose clauses and infinitival relatives is conditioned by the Thematic Role Hierarchy. The null subject (PRO) in the purpose clause is controlled by the noun phrase in the matrix clause which bears the highest theta-role, hence the controller is usually an Agent, e.g. *John<sub>i</sub>* (Agent) *robbed Philip<sub>j</sub>* (Patient) PRO<sub>i</sub> *to buy food for his<sub>i</sub> children*. He also assumes that the the-

matic structure determines the binding properties of arguments<sup>19</sup>. Bresnan and Kanerva (1992) point out that arguments bearing semantic roles which are lower on the Thematic Hierarchy (e.g. Theme) are cross-linguistically more likely to undergo incorporation into verb stems than arguments which are assigned "higher" roles (e.g. Agent). Valency-changing operations, e.g. passivization or the formation of middle sentences, are also claimed to be sensitive to semantic roles of arguments.

There has been some criticism of the use of semantic roles in formulating syntactic generalizations. Dowty (1989) observes that the definitions of semantic roles, offered in the literature so far, lack semantic rigour. Nevertheless, he admits that principles associating grammatical relations with thematic roles are important in first-language learning. He suggests that semantic roles may be regarded as a system of prototypes for classifying events.

It is to be regretted that no consensus has been reached so far on the number of semantic roles to be distinguished, and on the particular labels they should be associated with<sup>20</sup>.

The Theme is the most disputed example of a semantic role which is assigned to different arguments by various scholars. In Gruber (1965), Jackendoff (1972), or Van Valin and LaPolla (1997), the Theme is defined as the role of the object which moves or the position of which is being ascertained<sup>21</sup>, e.g. *The book* (Theme) *was under the table*, or *The ball* (Theme) *rolled down the hill*. The Patient in Van Valin and LaPolla (1997) is the role of the participant which undergoes a change of state or condition (usually as a result of the activity of the Agent), e.g. *Mark* in *John* (Ag) *hit Mark* (Pat), or *Mark* (Pat) *was hit by John* (Ag).

As was observed in Chapter 1, there is a need for distinguishing "affected" objects from "unaffected" objects, in order to predict the constraints on English passive nominals (e.g. the ill-formedness of *\*the book's putting on the table* vs. the well-formedness of *the book's publication*). Within the framework of the Role and Reference Grammar (RRG), e.g. Van

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<sup>19</sup> It needs to be borne in mind that a different position is taken by the majority of linguists who adopt other versions of generative syntax. They account for the binding properties of arguments and the control into purpose clauses by means of syntactic phrase structure.

<sup>20</sup> Differences in the definitions of roles, employed by particular linguists, may be responsible for divergences between versions of thematic hierarchies proposed in the literature, exemplified in Van Valin and LaPolla (1997: 245 ff.). See also the discussion of the position of Themes and Locatives in Bresnan and Kanerva (1992).

<sup>21</sup> Bresnan and Kanerva (1992) draw yet another boundary between Themes and Patients. Frequently, however, the label of Patient is dispensed with and the term Theme is extended to subsume Patients (e.g. in Safir 1987, Spencer 1991).

Valin and LaPolla (1997)<sup>22</sup> and Nunes (1993), Patients are by definition “affected”. Unaffected objects carry the role of Theme, e.g. *the book* in *Peter (Ag) put the book (Theme) on the table*, or the role of the Experienced (Stimulus of Emotions), e.g. *mushrooms* in *She likes mushrooms* (Stimulus).

Rozwadowska (1988) introduces the role labelled “Neutral” to refer to participants which have no control over the event and are not affected by it, e.g. *history* in *the knowledge of history* (cf. *\*the history’s knowledge*), or *the news* in *the disappointment with the news* (cf. *\*the news’ disappointment*). This role can be located on the hierarchy below Patients. In Pesetsky’s (1995) discussion of English verbs denoting emotions there are two distinct roles corresponding to Rozwadowska’s Neutral. In the case of Object-Experiencer verbs, such as *disappoint*, the noun phrase denoting the stimulus of emotion (e.g. *the news* in *The news disappointed him*) is assigned the role of Cause. In the case of Subject-Experiencer verbs, such as *like*, the noun phrase in the object position (e.g. *mushrooms* in *She likes mushrooms*) carries the role of Target of Emotion (also referred to as Subject-Matter of Emotion).

In order to simplify the discussion and avoid proliferation of roles<sup>23</sup> in the following sections, I will employ the set of semantic roles from Aissen (1999), amended to include the role of Neutral and Possessor.

## (22) The Thematic Role Hierarchy:

Possessor > Agent > Beneficiary > Experiencer/Goal > Instrument > Patient/  
Theme > Neutral > Locative

Picallo (1991) and Longobardi (2000) postulate that Possessor should be located at the top of the Thematic Role Hierarchy. Since this role is important mainly for argument linking in referential (i.e. result) nominals, it will be typically omitted in the discussion of argument linking in verbal nominals which exhibit the event reading.

<sup>22</sup> Apart from distinguishing a wide range of semantic roles, Van Valin and LaPolla (1997) employ two semantic macroroles, namely Actor and Undergoer. Each of the macroroles is treated as a generalization across the argument types found in a particular clause position. Actor is the generalized Agent-type role, borne by NPs in the subject position of a transitive or intransitive English sentence, e.g. Possessor in *She owns a large house*, Experiencer in *She likes me*, or Agent in *She hit me with a stick*. The Undergoer is the generalized Patient-type role, associated with the direct object of an active sentence in English, e.g. Patient in *She hit John with a stone*.

<sup>23</sup> Notice also that Van Valin and LaPolla (1997), similarly to Jackendoff (1972), allow for two thematic roles to be collapsed and carried by a single event participant. In the sentence *Mark sent the packet to David*, the NP *Mark* can be regarded as being both the Agent and the Source.

### 2.3.3. Harmonic alignment of scales in OT syntax

One of the aims of A i s s e n (1999) is to show that the Optimality-theoretic harmonic alignment of prominence hierarchies is able to account for the cross-linguistic association of semantic roles and the person/animacy rank<sup>24</sup>.

As noted in S i l v e r s t e i n (1976), the unmarked situation for the first and second person participants is to be Agents, while for the third person participants to be assigned the semantic role of Patients. A i s s e n (1999) is able to predict such a result by aligning the Person Scale in (23) (which is a subsection of the Animacy Hierarchy in 24) with the Thematic Hierarchy in (25).

(23) Person Scale (A i s s e n 1999): Local > 3<sup>rd</sup> [Local = 1<sup>st</sup>, 2<sup>nd</sup>]

(24) The Animacy Hierarchy (C o m r i e 1989):

1<sup>st</sup>/2<sup>nd</sup> person pronouns > 3<sup>rd</sup> person pronouns > proper names > human common nouns > nonhuman animate common nouns > inanimate common nouns

(25) Thematic Hierarchy<sup>25</sup> (A i s s e n 1999, A r s t e i n 1999)

Agent > Beneficiary > Experiencer/Goal > Instrument > Patient/Theme > Locative

(26) Harmony scales:

H<sub>x</sub>: Local/Agent ••• Local/Theme [more harmonic ••• less harmonic]

H<sub>y</sub>: 3<sup>rd</sup>/Theme ••• 3<sup>rd</sup>/Agent

Elements which are high on one prominence scale (e.g. the Person Scale in 23) are preferably aligned with elements which are at the top of another hierarchy<sup>26</sup>, e.g. the Thematic Hierarchy in (25). These preferences are stated as harmony scales in (26). The harmony scale H<sub>x</sub> states that it is more harmonic for local persons to attract high-ranking elements on

<sup>24</sup> The theoretical framework espoused in A i s s e n (1999) has been further developed in A i s s e n (2000). It has been subjected to criticism in, among others, G e r l a c h (2001) and N e w m e y e r (2000). Some of those objections are refuted in B r e s n a n and A i s s e n (2002).

<sup>25</sup> When presenting the assumptions of A i s s e n (1999), we will use her version of the Thematic Hierarchy in (25), rather than the extended version (including Possessor and Neutral), postulated in (22).

<sup>26</sup> A similar assumption is made in L a n g a c k e r (1991) and K a r d e l a (2000), who suggest that NPs which are at the top of the empathy hierarchy (see section 2.3.2.) are most appropriate as subjects.

the Thematic Hierarchy. Another harmony scale, i.e.  $H_Y$ , recommends aligning low-ranking elements at both prominence scales, i.e. third person and the role of Theme/Patient.

Aissen (1999) combines the tenets of OT with the assumptions of LFG (Lexical Functional Grammar). LFG draws the distinction between two types of structures associated with a well-formed sentence, i.e. the c-structure (constituent structure) and f-structure (functional structure). C-structure is interpreted phonologically, corresponds to a standard X-bar representation, and expresses "surface" relations between constituents. F-structure, which is semantically interpreted, represents basic grammatical relations in a sentence, e.g. SUBJ(ect), OBJ(ect), OBL(ique). Grammatical relations (functions) are regarded in (early) LFG as primitives of grammar, while within the Chomskyan current of generative linguistics they are treated as derived notions. Aissen (1999) shows how to predict preferences for certain types of semantic roles to be associated with arguments in the subject or object position. In order to do so, she employs two more scales, given in (27) and (28).

- (27) Relational Scale (Grammatical Functions Hierarchy) (Aissen 1999):  
Subject > Non-Subject (i.e. Subject > Object, Subject > Passive Agent)
- (28) Discourse/Conceptual Prominence Scale (Aissen 1999, following Legendre et al. 1993):  $X > x$  (where X and x refer to high and low prominence, respectively)
- (29) Aligning grammatical functions with thematic roles in clauses (Aissen 1999):  
Hierarchies:  
 $D_1 \text{ Su(bject)} > \text{Obj(ect)}$   
 $D_2 \text{ Ag(ent)} > \bullet \bullet \bullet > \text{Pat(ient)/Theme}$   
Harmony scales:  
 $H_X: \text{Su/Ag} > \text{Su/Pat}$   
 $H_Y: \text{Obj/Pat} > \text{Obj/Ag}$   
Constraint subhierarchies:  
 $C_X: * \text{Su/Pat} \gg * \text{Su/Ag}$   
 $C_Y: * \text{Obj/Ag} \gg * \text{Obj/Pat}$

One of the harmony scales in (29), i.e.  $H_X$ , refers to the alignment of the grammatical role of subject with the Thematic Hierarchy.  $H_X$  states that it is more harmonic to align the subject with the role of Agent, than with the role of Patient (i.e.  $\text{Su/Ag} > \text{Su/Pat}$ ). Harmony scales can then be translated into constraints which prohibit less harmonic associations of elements from prominence scales. Since  $\text{Su/Ag}$  is more harmonic than  $\text{Su/Pat}$ , the constraint  $* \text{Su/Pat}$  (i.e. "Do not have subjects with the role



of Patient") has a higher rank than the constraint \*Su/Ag. This is reflected by the constraint subhierarchy \*Su/Pat >> \*Su/Ag.

Prince and Smolensky (1993) require that one of the prominence scales involved in the alignment be binary. Alternatively, we can select a section of non-binary scale (e.g. Subject > Object) to align it with another non-binary prominence hierarchy. It is important to notice that Aissen (1999) postulates independent harmony scales for the elements from the lower and higher end of the particular prominence hierarchies. Consequently, alongside the constraint \*Su/Pat she posits the constraint \*Obj/Ag. Although these constraints seem to have a very similar effect (i.e. they predict that subjects should be agents and objects should be patients), by having both of them Aissen (1999) manages to account for cross-linguistic variation. While the constraint subhierarchies, e.g.  $C_x$  and  $C_y$ , are believed to be language-universal, language particular variation can be described through the interpolation of other constraints among those in the subhierarchy.

The constraints in (29), e.g. \*Su/Pat, interact with constraints derived by aligning the Grammatical Functions Scale with the Discourse Prominence Scale. Following Legendre et al. (1993), Aissen (1999) proposes that an input for a clause (or a verb phrase) in OT syntax consists of a predicate-argument structure. Each of the arguments in the input is provided with the specification of its thematic role, person, and relative prominence. Aissen (1999) assumes, in accordance with Legendre et al. (1993), that arguments can be prespecified as bearing low discourse prominence (x) or high prominence (X). The alignment of the Discourse Prominence Scale with the Grammatical Function Hierarchy produces constraints such as \*Su/x and \*Non-Su/X<sup>27</sup>. In associating the subject position with discourse prominent elements (by means of the constraint \*Su/x), Aissen (1999) departs from the position taken by several other researchers who investigate information structure. It is commonly observed that subjects in English often convey given information and function as topics (see Lambrecht 1994 and the references therein). Topics, in turn, are defined as elements which lack prominence, in contrast to foci, which tend to occur sentence-finally and consist of new and informative material. However, as is pointed out in Vallduví and Engdahl (1996), the split of a sentence into parts carrying given and new material (i.e. Ground and Focus) should be distin-

<sup>27</sup> The latter constraint penalizes the occurrence of arguments prespecified as discourse prominent in the non-subject position. \*Non-Su/X can, in fact, be split into two independent constraints, i.e. \*Obj/X, which refers to the object (Obj), and \*Agt/X, which refers to the passive agent (abbreviated as Agt in Aissen 1999).

guished from the division into Topic and Comment. Topics convey given information, yet they are conceptually prominent. They serve as links, or “points of departure for the clause as a message” (Valld & Engdahl 1996). Topics in English can be optionally associated with a high tone preceded by a low tone, hence they can be prominent also in the phonological sense.

The constraint  $*\text{Su}/x$ , which prohibits the occurrence of low-prominence subjects, is ranked above  $*\text{Su}/\text{Pat}$  in English. This is why English allows for passive sentences. The tableau in (30), adapted from Aissen (1999), presents a schematic selection of the output for an input in which there is a transitive verb and the Patient argument is pre-specified as prominent (i.e. as X). The candidate set in (30) is formed by associating the arguments with their morphosyntactic realization. Candidate (a) corresponds to an active sentence, and candidate (b) to a passive sentence. Since candidate (a) violates fatally the high-ranked constraint  $*\text{Su}/x$ , candidate (b) emerges as the winner, in spite of incurring the violation of  $*\text{Su}/\text{Pat}$ . Note that  $\text{Agt}$  is used below, following Aissen (1999), as an abbreviation for the passive agent (as occurring in *by*-phrases in English). The capital letters  $\text{Ag}$  and  $\text{Pat}$  stand for semantic roles of arguments.

(30) Input: V, argument 1:  $\text{Agent}/3^{\text{rd}} \text{ person}/x$ ; argument 2:  $\text{Patient}/1^{\text{st}} \text{ person}/X$

	$*\text{Su}/x$	$*\text{Su}/\text{Pat}$
a. $\text{Ag}/\text{Su}/3^{\text{rd}}/x + \text{Pat}/\text{Obj}/1^{\text{st}}/X$ [= active voice]	*!	
☺ b. $\text{Pat}/\text{Su}/1^{\text{st}}/X + \text{Ag}/\text{Agt}/3^{\text{rd}}/x$ [= passive voice]		*

In the original tableau given in Aissen (1999) each of the candidates in (30) additionally incurs two violations of  $*\text{GR}_x/\text{Pers}_y$ . The formula  $*\text{GR}_x/\text{Pers}_y$  stands for all constraints which prohibit marked combinations of person and grammatical function, e.g.  $*3^{\text{rd}}/\text{Su}$  and  $*\text{Local}/\text{Obj}$ . Since these constraints are always dominated by  $*\text{Su}/x$  and  $*\text{Su}/\text{Pat}$ , they do not play a decisive role in selecting the morphosyntactic realization of arguments in English<sup>28</sup>. For the sake of simplicity, they were omitted in (30).

Aissen (1999) further points out that some languages tolerate marked combinations of features, e.g.  $\text{Su}/3^{\text{rd}}$  and  $\text{Obj}/1^{\text{st}}$ , if they are expressed morphologically with a marked verbal category, such as the

<sup>28</sup> These constraints are responsible for the lower frequency of the passive voice in English in the case of first and second person agents (cf. Dingare 2001).

inverse. Marked combinations of features which have zero exponence are then prohibited. To predict such a situation, A i s s e n (1999) employs the mechanism of local conjunction (cf. S m o l e n s k y 1995, L e g e n d r e 2000, A r s t e i n 1998, Ł u b o w i c z 2002). S m o l e n s k y (1995) postulates that if two constraints are conjoined, it is more fatal to violate both of them, than to violate each of them separately. Consequently, a configuration that has two marked structures is decidedly more marked than a configuration involving one marked structure.

- (31) The Local Conjunction of  $C_1$  and  $C_2$  in a domain  $D$ ,  $C_1 \& C_2$ , is violated when there is some domain of type  $D$  in which both  $C_1$  and  $C_2$  are violated. Universally,  $C_1 \& C_2 \gg C_1, C_2$  (quoted after A r s t e i n 1998: 11).

A i s s e n (1999) conjoins the constraint  $*\emptyset$  (which penalizes the zero exponence of morphological categories) with the subhierarchies referring to combinations of grammatical function and person, exemplified in (32). This gives rise to the subhierarchies in (33).

- (32) a.  $*\emptyset$ : "Morphological categories cannot have zero exponence".  
 b. (Selected) subhierarchies of constraints involving alignment of grammatical function and person:  $*\text{Su}/3^{\text{rd}} \gg * \text{Su}/2^{\text{nd}}, * \text{Su}/3^{\text{rd}} \gg * \text{Su}/1^{\text{st}}$
- (33) The result of conjoining (32a) with (32b):  
 $*\emptyset \& * \text{Su}/3^{\text{rd}} \gg * \emptyset \& * \text{Su}/2^{\text{nd}}$   
 $*\emptyset \& * \text{Su}/3^{\text{rd}} \gg * \emptyset \& * \text{Su}/1^{\text{st}}$

The subhierarchies in (33) predict that it is less harmonic (and more marked) for a third person subject to have zero exponence than for first and second person subjects to be associated with zero exponence. One of the principles regulating local conjunction is the principle of ranking preservation (the term due to A r s t e i n 1998). The ranking of the constraints in the subhierarchy in (32b) is maintained in the resulting subhierarchy in (33).

In Chapter 5 of the present study, an attempt will be made to apply the mechanism of aligning prominence scales in the domain of event nominals. Before doing so, in Chapter 3 we will consider the status of possessive forms in event nominals as arguments or modifiers. In Chapter 4, in turn, we will discuss the differences in the argument structure and the event structure of two subtypes of Polish and English passive nominals (i.e. "genuine passive" and "quasi-passive nominals").

## Possessives as arguments in event nominals

### 3.1. Introductory

Before we attempt to employ the basic tenets of the OT approach outlined in Aissen (1999) in order to predict the most optimal structural realization of selected arguments in Polish and English event nominals, we will consider some problematic issues for the argument linking in nouns. We will focus in this chapter on the argumental status of possessive forms.

Although the present monograph is couched within a non-derivational framework of Optimality Theory, it is indispensable to review the rich (and still growing) literature on noun phrases written within various versions of the derivational generative model, e.g. the Principles and Parameters model, and the Minimalist Program.

Section 3.2. considers the question whether noun phrases can be regarded as argument-taking. Section 3.3. surveys the evidence provided so far in generative grammar for the parallelism between syntactic representations of clauses and noun phrases. Section 3.4. discusses the occurrence of the intransitive or ergative pattern in event nominals. It also considers the status of Slavic possessive elements as modifiers or arguments.

### 3.2. Do nouns take syntactic arguments?

The first question that will be asked here is whether nouns can be regarded as argument-takers, on a par with verbs. Some researchers take the position that nouns do not take any syntactic arguments but can be optionally accompanied by postmodifiers or premodifiers. Dowty (1989: 90) illustrates the possibility of omitting some or all semantic arguments of the deverbal noun *gift*.

- (1) a. the gift of a book from John to Mary (would surprise Helen)
- b. the gift of a book from John
- c. the gift of a book to Mary
- d. the gift from John to Mary
- e. the gift from John
- f. the gift to Mary
- g. the gift of a book
- h. the gift

On the basis of the data in (1) above he concludes that semantic arguments of nouns behave similarly to adjuncts of verbs. He regards event *-ing* nominals, e.g. *handing*, *sending*, as forming a restricted class of counterexamples to the generalization that nouns take no grammatical arguments.

- (2) a. The sending of a gift from John to Mary would surprise Helen.
- b. \*The sending would surprise Helen.
- c. The handing of a book to Mary would surprise John.
- d. \*The handing would surprise John.

An interesting account of the apparent difference between the behaviour of arguments of nouns and verbs is offered in Grimshaw (1990). She distinguishes between argument-taking nominals (i.e. complex event nominals) and nominals which take no arguments (i.e. simple event nominals or result nominals).

Referential nouns, such as *claim*, or *hypothesis*, are referred to as “result nominals” in Grimshaw (1990). They occur with optional satellites, e.g. *The hypothesis (that the Earth is flat) was shown to be invalid*. Simple event nominals, such as *murder*, *race*, *attempt*, *exam*, *trip*, *sleep*, are regarded as semantically but not syntactically relational, hence they can never take syntactic arguments. The nominal satellite which can accompany a simple event nominal has no argumental status in Grimshaw’s theory. It is optional and is referred to in Grimshaw (1990) as a com-

plement. The simple event nominal *an attempt* can, for instance, occur with an optional sentential complement *to murder John* (which has no argumental status for Grimshaw) whereas the complex event nominal *the felling* requires the obligatory internal argument *of the tree*. Complements are further distinguished from modifiers (Grimshaw 1990: 46). Only the former are related to the lexical conceptual structure of a given predicate. Simple event nominals and result nominals can also take modifiers<sup>1</sup>, e.g. *yesterday's* in *yesterday's trip*, *John's* in *John's walk*, or *by Dior* in *a dress by Dior*.

Arguments of complex event nominals are always obligatory. The apparent optionality of arguments in noun phrases arises, according to Grimshaw (1990), from the ambiguity of deverbal nominals. The derived nominal *assignment*, for instance, can either function as a referential noun (i.e. result noun), or a complex event nominal.

- (3) a. The assignment is to be avoided. (result noun)  
 b. The constant assignment of unsolvable problems is to be avoided. (complex event noun)

The nominal *examination* is ambiguous between the simple event and the complex event reading (see Rozwadowska 1997, Taylor 1996 for more examples of this type of ambiguity):

- (4) a. The examination took a long time. (simple event noun)  
 b. The instructor's examination of the papers took a long time. (CEN)

The recognition of the ambiguity of nominals is a way of accounting for the traditionally recognized "optionality of arguments" in nominals. Grimshaw (1990) claims that arguments of CENs must have a syntactic realization. If a nominal occurs without any argument, as in (3a) or (4a), it is either a simple event nominal, or a result nominal<sup>2</sup>.

Since we are concerned with the behaviour of event nominals, it seems justified to talk about argument linking. In the next section we will review the support provided in the literature for a parallelism between noun phrases and verb phrases.

<sup>1</sup> Grimshaw (1990) assumes that nominals related to intransitive verbs are names of simple events, e.g. *John's walk*. As is mentioned below in the next section, *by*-phrases occurring in CENs are treated as a-adjuncts in Grimshaw (1990), e.g. *the examination of the papers by the instructor*.

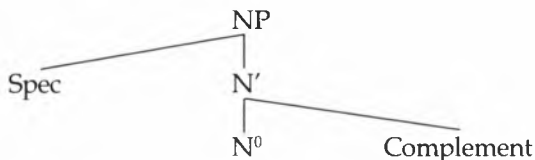
<sup>2</sup> As a matter of fact, Grimshaw (1990: 51) regards the phrase *the examination* in (4a) as a result nominal. Since it is clearly eventive, it seems more appropriate to treat it as a name of a simple event (see Taylor 1996: 177 for the same conclusion).

### 3.3. Parallelism between noun phrases and verb phrases, and the DP hypothesis

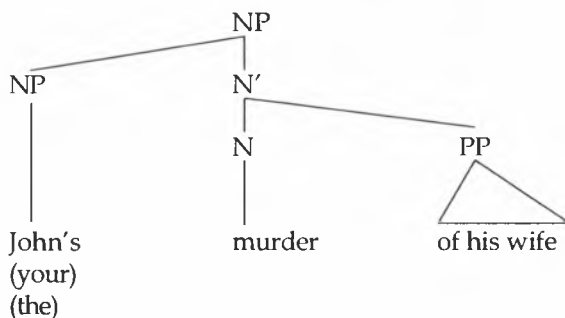
Many researchers who work within the paradigm of generative grammar stress similarities between the structure of clauses and noun phrases.

Chomsky (1970), Jackendoff (1977), and Giorgi and Longobardi (1991) argue that there is a parallelism between the representation of noun phrases and verb phrases. Nouns, similarly to verbs, take complements and specifiers. In the earlier versions of the Government and Binding Theory and the Principles and Parameters Model (e.g. Jackendoff 1977, Giorgi and Longobardi 1991), it is assumed that the noun phrase *John's murder of his wife* is a projection of the lexical head N(oun) *murder*. The phrase *of his wife* is analyzed as the complement, while *John's* – as the specifier of NP.

(5) a.



b.

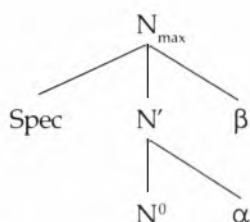


The PP complement *of his wife* can be regarded as the realization of the internal argument of the noun *murder*, hence it can be referred to as “the object” NP. The specifier *John's* is the expression of the external argument of *murder*, and it is the “subject” of the NP in (5). Giorgi and Longobardi (1991) provide evidence (e.g. from the constraints on anaphoric bounding, and from Weak Crossover phenomena) for the subject-complement asymmetry within noun phrases. Thus, the external and internal arguments of NPs are mapped onto hierarchically distinct positions.

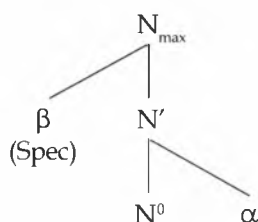
Furthermore, Giorgi and Longobardi (1991) suggest that there are cross-linguistic differences in the directionality parameters concerning NPs. In head-initial languages (including Romance and Germanic languages), internal arguments (i.e. complements) are projected to the right of the head noun. External arguments (i.e. subjects of NPs) are projected to the right of the head noun in Romance, and on the left of the head in Germanic languages.

(6) The Head-Subject Hypothesis

a. Romance



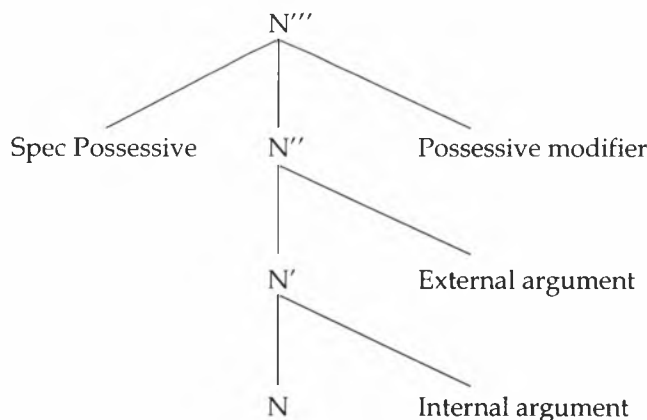
b. Germanic



In the case of Germanic languages, including English, Spec position is an argument position with the grammatical role of the subject.

The following structure is postulated in Giorgi and Longobardi (1991) for Italian NPs:

(7)



According to Giorgi and Longobardi (1991), elements which surface in the Specifier position (to the left of the head) in Italian NPs must be moved there from the right (i.e. from the position of the subject or the complement), subject to the Possessivization Principle, quoted below:

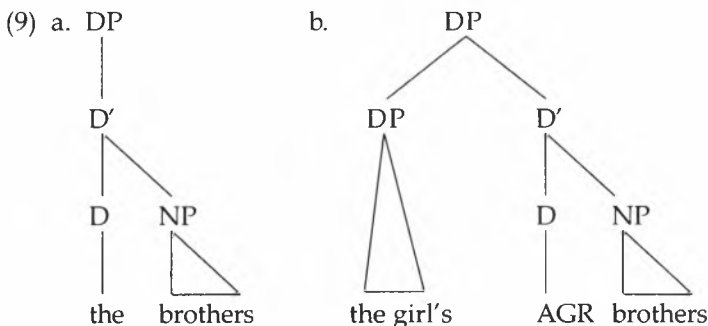


## (8) Possessivization Principle (Giorgi and Longobardi 1991: 68)

The unique phrase allowed to appear as a possessive is the hierarchically highest genitive argument of an NP.

Willim (1995a, 1995b) provides evidence for the asymmetry between the complement and subject positions in Polish noun phrases. Willim (1995a, 1995b) and Rozwadowska (1997) conclude that the structure of NPs proposed for Italian is well-suited to the description of NPs in Polish. Both external and internal arguments are projected to the right of the head in Polish, and the position of the Possessor phrase is distinct from that of the external argument. Willim argues that the distinction between Possessor Phrases, external arguments (Subjects), and internal arguments (Objects) of NPs accounts for the possibility of two adnominal genitive satellites in noun phrases denoting referential nouns, e.g. *kolekcja znaczków Piotra* 'collection stamps.Gen Peter.Gen'.

While Giorgi and Longobardi (1991) treat noun phrases as projections of the lexical category N, Szabolcsi (1983) and Abney (1987) reinterpret noun phrases as D(eterminer) P(hrases), i.e. projections of the functional head D(eterminer). According to their proposals, the head D(eterminer) selects an NP as its complement. Abney (1987) argues that D can be realized overtly (spelt-out) in English by the determiner, as in (9a). Alternatively, D may contain the covert determiner, i.e. an abstract nominal head AGR(eement), which assigns genitive case to the DP in the position of the specifier of the matrix DP (cf. 9b).



The DP-hypothesis by Abney (1987) further highlights the parallelism between nominal and sentential constructions. Both of them are projections of some functional head. Noun phrases are projections of the Determiner (D), which takes a lexical projection NP as its complement.

In the standard version of the GB (Government and Binding) Theory, clauses are regarded as projections of the functional head INFL(ection) whose complement is a lexical projection V(erb) P(hrase).

The evidence supporting the DP analysis in English and in Romance languages is provided in, among others, Abney (1987) and Longobardi (1994, 2000)<sup>3</sup>. De Wit (1997), Cardinaletti and Starke (1999), and Bernstein (2000) argue that functional categories of noun phrases (DPs) correspond closely to the functional categories in clauses (i.e. CPs).

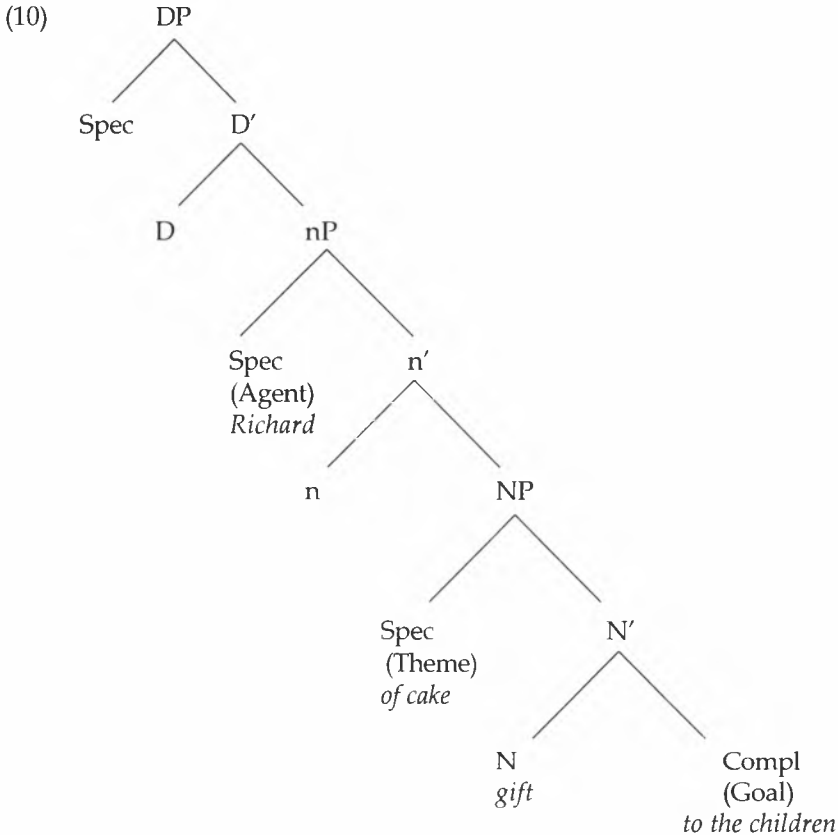
There is disagreement in the literature as to whether the DP layer should be postulated in all languages. The position that languages without overt languages have no DP layer is taken in, among others, Corver (1992), Zlatić (1997), and in Willim (1998, 2000). On the other hand, arguments for the occurrence of the DP level in article-less languages are given in, among others, Engelhardt and Trugman (1998), Progovac (1998), Migdalski (2000), and Rappaport (2000).

Some of the researchers who adopt the DP hypothesis postulate further functional projections mediating between the levels of DP and NP (see, among others, Ritter 1991, Picallo 1994, de Wit and Schoorlemmer 1996). Many researchers, however, assume that there is no need for a rich array of functional heads. This is the position taken in, among others, Engelhardt and Trugman (1998, 2000), Veselovská (1998), Trugman (2001), and Rappaport (2000).

In a recent introduction to the minimalist syntax, Adger (2003) assumes that noun phrases are contained within a functional projection headed by a "little" *n*, i.e. *nP*, which, in turn, is dominated by the DP layer. Arguments which carry the role of Agent in process nominals originate (i.e. are merged) in the position of the specifier of *nP* and are assigned the theta-role by the "little" *n* head. Then, they move to the specifier of DP. Arguments with the role of Theme (i.e. Patient) are merged as specifiers of the NP, while Goal arguments are complements of N. This is represented by the tree diagram for the nominal *Richard's gift of cake to the children*, quoted below (with slight modifications) from Adger (2003: 268).

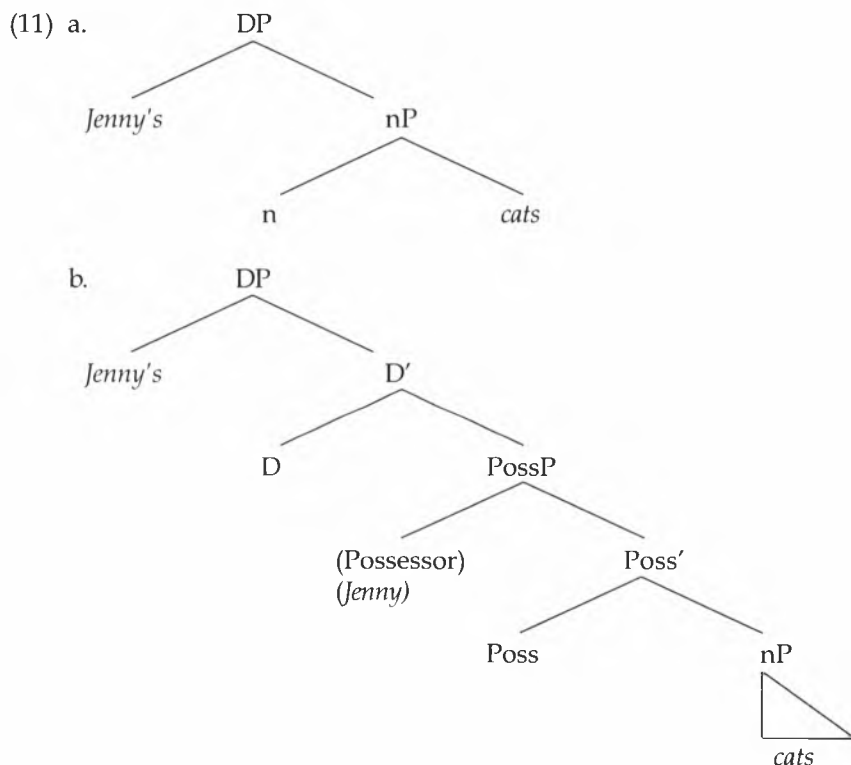
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<sup>3</sup> See Radford (1997), Haegeman (1994), Bernstein (2000), or Migdalski (2000) for useful overviews of the DP hypothesis.



Adger (2003), similarly to other researchers mentioned in this section, emphasizes the analogy between the structure of sentential and nominal constructions. The extended projection of the V(erb) P(hrase) contains the functional layers of vP (i.e. “little” v Phrase) and TP. The functional head T(ense) holds the tense feature. The subject of a clause (with the theta-role of Agent) originates as the specifier of vP, and raises to the specifier of TP. Theme arguments are merged as specifiers of VP, and Goals originate as complements within VP. In the case of unaccusative predicates (whose surface subjects carry the role of Patients/Themes, and exhibit object-like properties), such as *fall*, or *die*, the projection of vP lacks the specifier. The surface subject originates as the specifier of VP, and moves to Spec,TP in order to receive nominative case. A similar movement of the object-like argument from Spec,VP to Spec,TP occurs in the case of passive sentences. Adger (2003) assumes the existence of the passive functional head Pass (between TP and v), which selects an unaccusative vP.

In this version of the minimalist syntax, the functional head *n* resembles the head *v* in being able to assign the Agent theta-role. When there is no overt Agent in the noun phrase, the head *n* selects no specifier. This is postulated in the case of passive nominals, such as *the enemy's destruction (by the troops)*. The projection of little *n* lacks a specifier also in syntactic representations of simple nouns, such as *Jenny's cats*, as shown in (11a). However, Adger (2003) mentions yet another possible representation of referential noun phrases with possessors. He postulates tentatively the occurrence of an optional functional head *Poss* (cf. De Wit and Schoorlemmer 1996, Rappaport 2000). Possessive phrases in referential nouns would be generated as specifiers of *PossP*, and raise to *Spec,DP* (as in 11b).



No reference will be made in the following sections to the other functional projections postulated in DPs, since the analysis outlined in the sections to follow will not be couched in the derivational framework of the Minimalist Program, but in the non-derivational model of Optimality Theory. Let us emphasize that the main aim of this section was

to gather the evidence for the parallelism between noun phrases and verb phrases, rather than to determine the number and labelling of functional projections recognized inside noun phrases.

### 3.4. Are prenominal possessives argumental or non-argumental?

#### 3.4.1. The passive or ergative pattern in event nominals

While the previous section has presented generative research aiming at emphasizing the correspondence between noun phrases and verb phrases, several researchers, including Comrie (1976) and Comrie and Thompson (1985), warn against overestimating the parallelism between both types of phrases. Comrie (1976) and Comrie and Thompson (1985) notice that not many languages allow for the use of two genitive constructions in a single verbal nominal, in the way it is permitted in Germanic languages, e.g. in the English nominal *the enemy's destruction of the city*<sup>4</sup>.

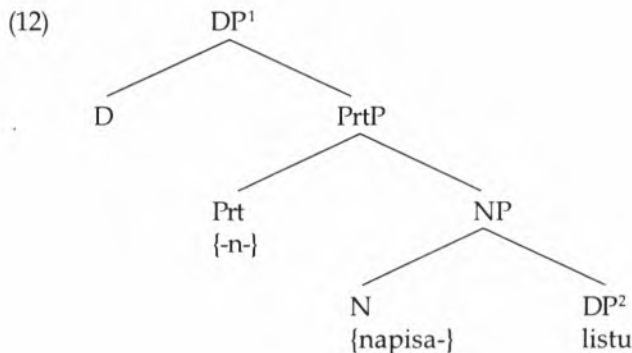
Within the paradigm of generative grammar, Grimshaw (1990), Borer (1991) and Picallo (1991), among others, claim that derived nominals are basically intransitive since they cannot take more than one argument. Borer (1991) and Picallo (1991) assume, within the theory of Parallel Morphology, that, in the course of the syntactic derivation of process nominals in Hebrew or Catalan, the abstract nominalizing suffix selects a passive verb phrase as its complement. Grimshaw (1990) proposes, within a slightly different model of generative grammar, that the process of nominalization in English resembles the process of passivization, since it involves the suppression of the external (i.e. Agent-like) argument. The suppressed external argument remains implicit, and it can license the so-called a(rgument)-adjuncts, i.e. prenominal possessives or *by*-phrases (as in *the destruction of the city by the enemy*, or *the enemy's destruction of the city*).

The position that predicates undergo passivization before nominalization is adopted in Engelhardt and Trugman (1998, 2000) for

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<sup>4</sup> See also Alexiadou and Stavrou (1998) for the approach which stresses differences between the complementation of verbs and nouns.

Russian event nominals, and in Rappaport (2002) for Polish nominals. Rappaport (2002) suggests that process nouns can be reinterpreted as mirroring the internal structure of passive clauses, in which the functional head *v* is replaced by the head *Prt* (i.e. the equivalent of the head *Pass* in Adger 2003). Below we present the internal structure proposed for the process nominal *napisanie listu* 'the writing of the letter' in Rappaport (2002).



There are some advantages of the “passive” approach towards nominalizations. Firstly, it predicts the occurrence of argument adjuncts, such as *by*-phrases in English and *przez*-phrases in Polish, both in passive clausal structures and in nominals. Secondly, since these are adjuncts, rather than arguments, they are correctly predicted to be optional. Thirdly, the hypothesis of passive origin of deverbal nominals predicts the nonoccurrence of Polish or Russian event nominals accompanied by two adnominal genitives, which would correspond to the external and the internal argument of the verbal predicate, e.g. Polish *\*zbudowanie mostu żołnierzy* ‘building bridge.Gen soldiers.Gen’. Finally, such an approach accounts for the occurrence of the passive morphology in process nominals in Russian or Polish (compare the passive participle *zrobiony* ‘made’ and the verbal nominal *zrobienie* ‘making.Pf’ in Polish).

However, the adoption of the view of the passive origin of nominalizations gives rise to problems in accounting for the occurrence of process nominals derived from transitive verbs which cannot passivize, or from intransitive verbs. Grimshaw (1990) claims that event nominals derived from intransitive verbs in English are not argument-taking nominals. This claim is shown to be invalid, at least for Polish and Russian nominals, in Schoorlemmer (1995) and Rozwadowska (1997).

Moreover, the parallel between *by*-phrases in derived nominals and verbal passives is not ideal. *By*-phrases in English derived nominals are restricted to Agents while in the case of verbal passives they can bear any thematic role that can be ascribed to the subject of the active verb (cf. *?the receipt of the letter by your mother* vs. *the letter was received by your mother*). Longobardi (2000) and Alexiadou (1999) show that cross-linguistically there may be a difference between the expression of the Agent in passive clauses and in nominalizations. In German, for instance, the Agent is introduced by the preposition *von* in verbal passives, and by the preposition *durch* in nominalizations. Compare, in this respect, the German passive sentence *Die Stadt ist von den Barbaren zerstört worden* 'The city is destroyed by the barbarians' and the nominalization *die Zerstörung der Stadt durch die Barbaren* 'the destruction of the city by the barbarians'.

Grimshaw (1990) argues, following Williams (1982), that prenominal possessives in English noun phrases, such as *the city's destruction* or *Bill's examination*, can have a free thematic interpretation, i.e. they can have "any relation at all" to the head. This is not entirely correct, as has been shown in Chapter 1 by the ill-formedness of possessives with the semantic role of Experienced or Neutral, e.g. *\*the fact's knowledge*. Safir (1987) regards the occurrence of the Affectedness constraint on Saxon genitives as evidence for the argumental status of the prenominal position in English noun phrases. He observes that semantic restrictions are expected to refer to argument positions rather than to modifier, or a-adjunct, positions.

Prenominal possessives in Polish are regarded as modifiers in, among others, Willim (1999) and Rozwadowska (1997). However, as is pointed out in Engelhardt and Trugman (2000), the recognition of prenominal possessives as modifiers predicts incorrectly the possibility of multiple possessors<sup>5</sup>, cf. Russian *\*Vanino Petino ispolnenie* '?Vania's Petja's performance', Polish *\*Jankowe Hanczyne czekanie* '?Janek's Hanka's waiting' or English *\*John's Peter's arrival*.

Some other researchers (e.g. Williams 1987, Alexiadou 1999, Nunes 1993, Laczko 1995, 2000) defend the view that nominals are inherently intransitive. They postulate that the syntax of noun phrases resembles the syntax of ergative languages.

Typologically, the majority of Indo-European languages, including Germanic, Slavic, and Romance languages, belong to the Nominative-

<sup>5</sup> Notice that although Engelhardt and Trugman (2000) adopt the hypothesis of the passive origin of event nominals, they regard Russian prenominal possessives as arguments, i.e. they regard the specifier of DP as an argumental position in Russian.

Accusative type. Subjects of transitive verbs (for which the symbol A is used) and subjects of intransitive verbs (commonly abbreviated as S) are marked by the same surface morphological case, i.e. Nominative. Objects of transitive verbs (O) are marked by the accusative case. Other languages belong to the Absolutive-Ergative type. They include, among others, Basque, some Native American languages (e.g. Dakota, Slave) and Australian languages (e.g. Dyirbal). In ergative languages the same morphological case (i.e. Absolutive) is assigned to subjects of intransitive verbs (S) and objects of transitive verbs (O). Subjects of transitive verbs (A) receive the Ergative case<sup>6</sup>.

Williams (1987) was the first to postulate that nominalizations in Nominative-Accusative languages exhibit an ergative pattern. He suggests that the genitive *of*-phrase in English is an equivalent of the absolutive case marker, while the prenominal possessive (i.e. Saxon genitive 's) and the *by*-phrase are ergative markers.

Nunes (1993) and Van Valin and LaPolla (1997), who adopt the framework of the Role and Reference Grammar, argue that deverbal nominals in English can take only one "direct core" argument, which is realized syntactically by the *of*-phrase. The selection of the single core argument in deverbal nominals follows the ergative pattern<sup>7</sup>. It is the object-type argument in nominals related to transitive verbs, and the subject-type argument in nominals derived from intransitive verbs, cf. *the knowledge of French* and *the death of Sam*<sup>8</sup>. Nunes (1993) analyzes the position of the prenominal Saxon genitive as corresponding to the clause-external position available for topicalized elements. She observes that this position is open to adverbial elements, cf. *Yesterday, who destroyed the court summons?* and *yesterday's destruction of the court summons*.

<sup>6</sup> Apart from showing the same case marking, subjects of intransitive verbs show the same syntactic behaviour as objects of transitive verbs in ergative languages. See Dixon (1979) for more discussion.

<sup>7</sup> The view that mapping principles in Hungarian event nominals follow the ergative pattern is advanced in Laczko (1995, 2000), who adopts the model of Lexical Functional Grammar. He recognizes the occurrence of one semantically unrestricted grammatical function in noun phrases, referred to as POSS. POSS in Hungarian event nominals corresponds to S or P in verbs, i.e. to the grammatical function of Subject in intransitive predicates or Object in transitive verbs.

<sup>8</sup> This matter is, in fact, slightly more complicated. Nunes (1993) shows that the subject-type argument can be expressed by *of*-phrase in the case of a special group of nominals derived from transitive predicates. This group includes nominals which contain an activity predicate in their logical structure, e.g. *the attack of the killer bee on the inhabitants of San Francisco* (cf. *The killer bees attacked the inhabitants of San Francisco*).



Alexiadou (1999) develops, within the framework of the Minimalist Program and Distributed Morphology, the hypothesis that the selection of the single core argument in deverbal event nominals follows the ergative pattern. She suggests that when both arguments of a nominal have some syntactic expression, Agents surface as oblique elements, i.e. as agentive prepositional phrases. This follows, according to Alexiadou (1999), from the similarity between the syntactic representations of event nominals and unaccusative verbs (i.e. intransitive verbs whose single argument surfaces in the subject position, but carries the semantic role of Theme/Patient, e.g. *die*, *fall*). She assumes that event nominals include a set of verbal functional projections (i.e. vP and Aspect Phrase). Both in the case of process nominals and unaccusative verbs the projection of the “light v” (i.e. “little v”) lacks a specifier (see the remarks on Adger’s (2003) representation of unaccusative verbs in the previous section). In other words, both event nominals and unaccusative predicates select a deficient v, which does not license an external (i.e. Agent-type) argument.

Potential counterarguments to the hypothesis of ergative, or passive, pattern of event nominals are provided by the occurrence of transitive nominals, e.g. English *your rearrangement of the furniture*. They will be discussed in the immediately following section.

### 3.4.2. Transitive nominals

Transitive nominals are deverbal nominals in which both the Agent and the Patient/Theme argument are expressed, but the Agent does not surface in an agentive PP or in an oblique case-form (e.g. instrumental case in Russian). More examples of transitive nominals are provided below (e.g. from Picallo 1994, de Wit 1997, Schoorlemmer 1998a, Alexiadou 1999, Veselovská 1998, Dimitrova-Vulchanova 2000).

- (13) a. the barbarians’ destruction of Rome (English)  
       b. Asterix’ verovering van een naburig dorp (Dutch)  
           ‘Asterix’ conquest of a neighbouring village’ (de Wit 1997: 67)  
       c. Peters Behandlung seiner Mutter (German)  
           Peter.Poss treatment his mother.Gen (de Wit 1997: 57)  
       d. el descobriment de Gallo del virus de la leucemia (Catalan)  
           the discovery of Gallo of virus of leukemia  
           ‘Gallo’s discovery of the leukemia virus’ (Picallo 1994)

- e. i perigrافي tu topiu tu Seferi (Greek)  
the description the landscape.Gen the Seferis.Gen  
'Seferi's description of the landscape' (Alexiadou 1999: 202)
- f. Oni nabljudali Mašin osmotr vrača (Russian)  
they watched Masha.PossAdj examination doctor.Gen  
'They watched Masha's examination of the doctor'. (Schoorlemmer 1998a: 229)
- g. Petrovo časté pozorování Jany (Czech)  
Peter.PossAdj frequent observing Jana.Gen  
'Peter's frequent observing of Jane' (Veselovská 1998: 271)
- h. Ivanovoto unistozavane na dokumentite (Bulgarian)<sup>9</sup>  
Ivan.Gen destruction to documents.the  
'Ivan's destruction of the documents' (Dimitrova-Vulchanova 2000)
- i. twoje rąbanie drzewa nową siekierą (Polish)  
your hacking tree new axe.Instr  
'your hacking of the tree with a new axe' (Topolińska 1984: 366)
- j. harisat ha-cava 'et ha'ir bi-mehirut (Hebrew)  
destruction the-army Acc the-city in quickness  
'the army's destruction of the city quickly' (from Alexiadou 1999: 122,  
after Siloni 1997)

With respect to Greek, French, or Italian, Alexiadou (1999: 195 ff.) argues that nominals which occur with two genitives are necessarily result nominals. One of the genitives denotes the Theme, while the other is referred to as "the Creator genitive" in Alexiadou (1999). She suggests that the Theme genitive and the head noun in Greek form a type of a compound noun, since the Theme genitive does not allow modification (as in 14b), in contrast to the Creator genitive in (14a).

- (14) a. i metafrasi tis Odiasias tu eksohu Kakridi (Greek)  
the translation the *Odyssey* the great Kakridi  
'the translation of *Odyssey* by great Kakridis'
- b. \*i metafrasi tis makroskelus Odiasias tu Kakridi  
the translation the lengthy *Odyssey* the Kakridi  
'the translation of the lengthy *Odyssey* by Kakridis'

Alexiadou (1999) further assumes that the Creator genitive carries a modifier role. It is a kind of Possessor genitive, which is possible with result nominals only.

<sup>9</sup> Interestingly enough, Bulgarian shows additional constraints on transitive nominals. According to Dimitrova-Vulchanova (2000), the replacement of the prenominal genitive by a possessive pronoun makes the sentence unacceptable, e.g. \**negovoto unistozavane na dokumentite* 'his destroying of the documents'.

Let us note that a similar account is postulated for transitive nominals in Polish in Willim (1999, 2000). Willim (1999) argues, following Puzynina (1969), that the presence of both the prenominal possessive and the post-head genitive calls for a non-event, namely the “manner” interpretation of Polish nominals related to transitive verbs, as in (15) below. The occurrence of the agentive *przez*-phrase is incompatible with the “manner” reading, since it usually triggers the factive or event reading of the nominal.

- (15) a. Podziwiam      twoje      ujęcie      tego      tematu.  
 admire.1SgPres   your.Sg   grasping   this   matter.Gen  
 ‘I admire your grasping of the matter’.
- b. (\*)Podziwiam      ujęcie      tego      tematu      przez      Piotra<sup>10</sup>.  
 admire.1SgPres   grasping   this   matter   by   Peter  
 ‘I admire Peter’s grasping of this matter’. (from Willim 1999, ex. 40)

Willim finds nominals such as those in (16) ill-formed, or seriously degraded, as the prenominal possessives coincide with the event (i.e. process) reading of the head nouns:

- (16) a. (\*)ich      odbudowa      kraju      trwała      pięć      lat.  
 their   restoration   country.Gen   lasted   five   years  
 ‘Their restoration of the country lasted five years’.
- b. (\*)jego      realizacja      planu      zajęła      dwa      lata.  
 its/his   realization   plan.Gen   took   two   years  
 ‘His implementation of the plan took two years’. (ex. 42a, 42b in Willim 1999)

Consequently, Willim (1999, 2000) concludes that Polish, in contrast to English or Italian, does not allow for transitive event nominals. In other words, the external and internal arguments of event nominals in Polish cannot be simultaneously realized. The external argument must remain implicit (and can license an agentive *przez*-phrase, cf. Grimshaw 1990)<sup>11</sup>.

A different position will be taken in the present study. We regard the examples in (16) as acceptable<sup>12</sup>, even though they may have the flavour

<sup>10</sup> The asterisk is put in brackets since some native speakers of Polish, including Professor Ireneusz Bobrowski, find (15b) acceptable.

<sup>11</sup> A similar conclusion is reached in Rozwadowska (1997: 55) who suggests that “[p]ossessive phrase can accommodate only a single event participant” in Polish, Russian, or Romance nominals.

<sup>12</sup> As has been pointed out to me by Professor Bobrowski, the infelicity of the examples in (16) may be due to the juxtaposition of two adnominal genitives, i.e. *ich* ‘them/

of “journalese”. Puzynina (1969) treats transitive nominals with prenominal possessives as “stylistically marked” (and identifies them as characteristic of informal Polish). Topolińska (1981, 1984) and Jędrzejko (1993) find them fully acceptable. Jędrzejko (1993: 62 ff.) gives the following examples of Polish transitive nominals:

- (17) a. *twoje krojenie chleba* ‘your cutting of the bread’  
 b. *Jankowe/jego czytanie książek* ‘John’s/your reading of (the) books’

The availability of the event reading for the transitive nominals in (17) can be highlighted by an appropriate context, as in (18) below:

- (18) *(To) twoje krojenie chleba trwało prawie pół godziny.* ‘Your cutting of the bread lasted at least half an hour’. (= i.e. It took you at least half an hour to cut the (loaf of) bread.)

Variability in judgments concerning the well-formedness of transitive event nominals, such as those in (16), may stem from the availability of the phrases in (19) as more common alternatives:

- (19) a. *Odbudowywanie przez nich kraju trwało pięć lat.*  
 restoring.Impf by them country.Gen lasted five years  
 b. *Realizowanie swoich planów zajęło mu dwa lata.*  
 executing self’s plans.Gen took him.Dat two years

In a cross-linguistic study of nominalizations, Koptjevskaja-Tamm (1993: 197) observes that an action nominal can combine with its arguments in two (or more) different ways, depending on its meaning. Such a situation is referred to as a “semantic split”. She suggests, following Padučeva (1974), that in Russian the opposition between nominals with the pre-head possessives, and nominals with post-head pronouns in the instrumental case corresponds to the difference between the process/event reading, and the fact reading of the nominalization, as shown below:

- (20) a. *Jego včerašnee ispolnenie Ravelja bylo velikolepno.* (process/event)  
 ‘His performance of Ravel yesterday was wonderful’.  
 b. *Ispolnenie im Ravelja bylo neumestno.* (fact)  
 ‘His performance of Ravel was out of place’.

their’ and *kraju* ‘country.Gen’. The replacement of the third person pronoun by the first or second person pronoun (i.e. the use of an unambiguously possessive form) increases the acceptability of the phrases in (16), cf. *moja realizacja planu* ‘my implementation of the plan’.

The link between the use of the prenominal possessive in Polish and the occurrence of the “manner” interpretation of the nominal could be interpreted as another instance of a “semantic split”. Let us note, however, that Polish prenominal possessives do not obligatorily trigger the “manner” reading of process nouns. They can precede event nouns with the “factive” reading of process nouns, as shown in (21):

- (21) Denerwuje mnie to wasze codzienne śpiewanie kołęd.  
 annoys.3Sg me.Acc this your everyday.Adj singing carols.Gen  
 ‘I am annoyed with your singing of carols everyday’. (i.e. I am annoyed with the fact that you sing carols everyday.)

Russian transitive nominals with the ‘factive’ reading are interpreted in Engelhardt and Trugman (2000) as non-event nominals (which contain no verbal head in their projection). Notice, however, that the head nominals with the factive (or proposition<sup>13</sup>) reading in Polish or Russian exhibit a verb-like syntactic behaviour. For instance, in Polish they can be accompanied by adverbial modifiers, as in *Dostaniesz nagrodę za wykonanie tej pracy szybko i starannie*. ‘You’ll get a reward for carrying out this task quickly and carefully’<sup>14</sup>. They can also occur with prepositional phrases denoting duration, e.g. *Zaniepokoiło mnie (to) twoje surfowanie po internecie przez całą noc*. ‘I was alarmed at your surfing the Internet for the whole nights’.

In Cetnarowska (1993) it is argued that the manner, factive and degree readings should not be regarded as discrete senses but as different facets of the general action/process meaning assigned to nominalizations. While a simultaneous activation of two or more discrete senses results in semantic oddness (i.e. it produces the “zeugma” effect, cf. Cruse 1986), the sentences below are not zeugmatic, although the first part of the sentence requires the event reading, while the second allows the factive or manner reading.

- (22) a. The arrest of the Jewish personnel, which took place on July 21<sup>st</sup>, came as a shock to the French public.

<sup>13</sup> Similarly, when discussing deverbal nominals in English with the “proposition” reading (i.e. paraphrasable as ‘the fact that...’ or ‘that...’), Snyder (1998) shows that they resemble sentential constructions in many respects (e.g. in the availability of aspectual modifiers, such as *frequent*, and temporal adverbials). This is discussed in greater detail in the following chapter.

<sup>14</sup> Koptjevskaja-Tamm (1993: 199) suggests further that Russian nominalizations with the non-fact (i.e. process/event) reading resemble ordinary noun phrases in their internal structure, e.g. in the occurrence with adjectival modifiers. Russian nominalizations with the fact (and proposition) reading, in turn, require adverbial modifiers.

- b. The attack of the National Guards on students, which was shown on TV last night, was extremely brutal. (from Cetnarowska 1993: 95)

Similar judgments obtain when equivalent Polish examples are considered:

- (23) a. Aresztowanie żydowskich pracowników, które miało miejsce 21 lipca, było szokiem dla francuskiej opinii publicznej.  
 b. Atak Gwardii Narodowej na studentów, który pokazano zeszłej nocy w telewizji, był niezwykle brutalny.

Therefore, we reject the assumption that transitive nominals in Slavic languages are necessarily non-event nominals<sup>15</sup>.

Consequently, our analysis will allow for the occurrence of a transitive pattern in Polish event nominals, which resembles the argument realization in verbs. The transitive pattern in Polish noun phrases appears to be less frequent than the ergative pattern (when the Agent argument is expressed by a prepositional phrase or an oblique case form). This may be due to constraints on the prenominal possessive position. As was mentioned in Chapter 1, many younger speakers of Polish reject possessive forms derived from kinship terms or Christian names, e.g. *Romkowy* 'Romek.PossAdj', *Janowy* 'Jan.PossAdj' or *babciny* 'grandma.PossAdj'. The rejection of such possessive adjectives is responsible for the occurrence of the following sentences, quoted below from Topolińska (1984: 366) and Rappaport (2000)<sup>16</sup>.

- (24) a. to wieczne Romka kiwanie głową  
 this constant Romek.Gen nodding head.Instr  
 'this constant nodding of the head of Romek's'  
 b. I wtedy się zaczęło to Jana codzienne krytykowanie  
 and then r.cl. began this Jan.Gen daily criticizing  
 Hanki i Basi  
 Hanka.Gen and Basia.Gen  
 'And then began this daily criticism of Hanka and Basia of Jan's'.

<sup>15</sup> Transitive nominals in Germanic languages can clearly denote processes. Alexiadou (1999) postulates that the English nominal *the enemy's destruction of the city* is not transitive in the same way as the corresponding verbal predicate in *The enemy destroyed the city*. The Agents in clausal and in nominal structures are merged in a different way. The Agent argument in a clausal structure is introduced by a non-deficient light *v* (i.e. it is merged in Spec, vP). The Agent in a transitive nominal is not introduced in the embedded verbal projection. It is introduced by *D* and merged in Spec, DP.

<sup>16</sup> Rappaport (2000) and Migdalski (2000) suggest that the noun phrases in question involve a structural movement of the adnominal genitive to the position of [Spec, DP] in Polish.

The sentences in (24) above appear to violate the ban on the occurrence of double genitive arguments in Polish event nominals (with the process or factive reading). They also exemplify the further blurring of the difference between possessive adjectives and adnominal genitives in Polish, which is apparent from the variable use of the adnominal genitive form *Pana* 'You.SgGen' or the possessive adjective *Pański* 'Your.Sg' as the polite second person forms, cf. *Pana kapelusz* 'You.SgGen hat' or *Pański kapelusz* 'Your.Sg hat'.

There is also a functional motivation for the high frequency of the ergative pattern in nominals related to transitive predicates, such as *śpiewanie piosenek (przez harcerzy)* 'the singing of songs (by scouts)'. In her study of deverbal nouns in Polish, Jędrzejko (1993: 88 ff.) remarks that the use of nominalizations allows the speaker to "hide" the agent. By doing so, the speaker can achieve a higher degree of generalization in the message conveyed and can avoid the expression of those items of information which s/he regards as less important (e.g. referring to the time or the causer of the event).

### 3.4.3. The argumental status of prenominal possessives in Slavic languages

The issue whether prenominal possessives (or prenominal genitives) should be regarded as arguments of the head noun – or as modifiers – is a matter of controversy in the literature (cf. Bernstein 2000 for a brief discussion). The debate concerning the argument-like or modifier-like status of pre-head elements in noun phrases is particularly heated in the case of Slavic languages.

Giorgi and Longobardi (1991) suggest the existence of a parametric distinction between the status of prenominal possessives in Italian and English. Possessives in English or German should be recognized as Determiner Phrases (DPs), and they can function as arguments. Prenominal possessives in Italian, in turn, agree in gender and number with the head noun, hence they should be regarded as adjectival modifiers. It is assumed in, among others, Willim (1995a, 1995b) and Rozwadowska (1997) that prenominal possessives in Slavic languages also have the status of modifiers (due to their adjectival behaviour).

As a matter of fact, Slavic possessives exhibit a mixture of adjectival and nominal properties. Zlatić (2001) suggests that they are syntacti-

cally adjectives and semantically nouns. Rappaport (1998) recognizes possessive pronouns and possessive adjectives as representatives of a hybrid category<sup>17</sup>, i.e. [D, N, Adj].

On the one hand, they have a syntactic distribution typical of adjectives. Like ordinary adjectives, they can precede the head noun, e.g. *moja przyjaciółka* 'my friend', *Jankowa żona* 'John's wife'. Furthermore, possessive pronouns in Polish (and in other Slavic languages) show inflectional properties of adjectives. They are inflected for gender, number and case to agree with their head nouns, cf. *mój przyjazd* 'my.MSgNom arrival.SgNom', *przed moim przyjazdem* 'before my.MSgInstr arrival.SgInstr', *twoja ucieczka* 'your.FSgNom escape.SgNom', *przed twoją ucieczką* 'before your.FSgInstr escape.SgInstr'. It is only third person possessive pronouns which are not inflected to agree with their heads (since they arose from the third person genitive forms).

On the other hand, Slavic possessives pattern together with nouns. They are sometimes replaceable by uncontroversially nominal forms, i.e. adnominal genitives. This happens when the Agent is expressed by a lexical (i.e. non-pronominal) noun phrase, e.g. *jej przyjazd* 'her arrival' vs. *przyjazd Hanki* 'Hanka's arrival'. The adjectival inflected first or second person possessive form can be replaced by an adnominal genitive when a pronoun is accompanied by a postmodifier.

- (25) a. ?przyjazd ciebie (Gen) jako byłej żony 'arrival of you(Sg) as the ex-wife'  
 b. ?obecność mnie jako przedstawiciela związków zawodowych 'the presence of me as a representative of trade unions'

The examples in (25) are preceded by a question mark since not all speakers find such nominals fully acceptable. Nevertheless, nominals such as those below can be found on web-pages:

- (26) przybycie nas "Polonusów" z Zachodniej i Wschodniej Europy oraz Australii do Szczecina  
 'arrival of us – members of the Polish community from Western and Eastern Europe or Australia – in Szczecin'  
 (<http://www.naszapolonia.com/home/Nowemyslenie.htm>; 27 September 2004)

Furthermore, possessive pronouns are referential and can bear various thematic roles. For instance, they can denote Agents (*nasza podróż* 'our journey'), Patients (*jej zwolnienie* 'her dismissal'), Experiencers (*wa-*

<sup>17</sup> According to Rappaport (1998), pronouns are also instances of a hybrid category, i.e. [D, N].



*szę zmęczenie* 'your.Pl tiredness'), as well as Possessors (*twój samochód* 'your.Sg car').

Babyonyshev (1997), Veselovská (1998), Trugman (2001), de Wit and Schoorlemmer (1996) as well as Rappaport (1998, 2002) argue that at least some possessive adjectives in Russian (i.e. those with the Agent reading in event nominals) should be analyzed as being in an argument position. Below we will follow the above-mentioned authors in postulating the argumental analysis of Polish possessives in event nominals.

First, possessives satisfy the lexical requirement of the head noun for an external argument in intransitive nominals. This is shown in (27a) and (27b) below, where the possessive pronouns denote the Agents. The lack of any overt realization of the single participant is allowed in intransitive nominals only if there is an implicit argument with the arbitrary [+human] interpretation, as in (27c). In Williams (1987) and Safir (1987), among others, such an implicit argument is represented as PRO<sub>arb</sub>, e.g. PRO<sub>arb</sub> *bieganie po lesie* '(someone's) running in the forest'.

- (27) a. *wasz śpiew*  
           your.Pl singing  
       b. *twoje poranne bieganie po parku*  
           your.Sg morning.Adj running around park  
       c. *Bieganie jest dobre dla zdrowia.*  
           running is.3Sg good for health

In nominals headed by nouns derived from transitive verbs, the possessive can satisfy the requirement for an internal argument. The event nominal *spotykanie* 'meeting.Impf' is incomplete without an adnominal genitive, or a pronominal possessive expressing the object.

- (28) a. \**Spotykanie sprawia mi wiele przyjemności.*  
           meeting.impf causes me.Dat much pleasure.Gen  
       b. *Spotykanie starych przyjaciół sprawia mi wiele przyjemności.*  
           meeting.impf old.Gen friends.Gen causes me.Dat much pleasure.Gen  
       c. *Ich spotkanie sprawia mi wiele przyjemności.*  
           their meeting.impf causes me.Dat much pleasure.Gen  
           'Meeting them/old friends causes much pleasure to me'.

Moreover, possessive pronouns are eligible to serve as antecedents for a reflexive pronoun contained in the same NP (see Corbett 1987 for more discussion of the availability of possessive adjectives as controllers for reflexive pronouns and for relative pronouns in various Slavic languages).

- (29) a. *wasze<sub>i</sub> analizowanie swoich<sub>i</sub> własnych błędów*  
           your.Pl analyzing.Nom self's own.GenPl mistakes.Gen  
       b. *twoja<sub>i</sub> nienawiść do siebie<sub>i</sub> samego*  
           your.Sg hatred to yourself

Possessives can bind anaphoric pronouns<sup>18</sup>. This is shown in (30a) by the example from Russian (cited in *B a b y o n y s h e v* 1997, *T r u g m a n* 2001, and originally due to *C h v a n y* 1977), and by a similar Polish sentence in (30b):

- (30) a. *Ja prinesla Nadinu<sub>i</sub> knigu<sub>k</sub>. Ona<sub>i</sub> prosila ee<sub>k</sub> segodnja vernut'.*  
           I brought Nadia<sub>i</sub>.PA book<sub>k</sub> she<sub>i</sub> asked it<sub>k</sub> today return  
           'I brought Nadia's book. She asked that it be returned today'.  
       b. *Nie mogę znaleźć babcinej<sub>i</sub> chusty. Prosiła mnie, żebym*  
           not can find grandma<sub>i</sub>.PA kerchief<sub>k</sub> she<sub>i</sub> asked me to+1SgF  
           *ja uprała.*  
           it<sub>k</sub> wash  
           'I cannot find grandma's kerchief. She asked me to wash it'.

Possessive pronouns or possessive adjectives in process nominals (in Russian as well as in Polish) can serve as controllers of rationale clauses:

- (31) a. *Sosedkina poezdka v Moskvu čtoby kupit' produkty ne sostojalas'.* (Russian)  
           neighbour.PA trip to Moscow to buy food not happened  
           'The neighbour's trip to Moscow to buy some food was foiled'. (from *T r u g m a n* 2001)  
       b. *Twój wyjazd do Niemiec, żeby uniknąć poboru do wojska, był błędem.* (Pol)  
           'Your leave for Germany to avoid conscription to army was a mistake'.

Possessive phrases, as well as adnominal genitives, can bind the implicit (i.e. PRO) subject of adverbial participles in Russian (and adverbial phrases in Polish).

- (32) a. *naše<sub>i</sub> pronikновение v magazin, PRO<sub>i</sub> ne razbudiv storoža* (Russian)  
           our breaking into store not waking-up guard  
           'our breaking into the store, without waking up the guard' (*T r u g m a n* 2001)  
       b. *twój<sub>i</sub> wyjazd z Warszawy, bez PRO<sub>i</sub> pożegnania się z nami*  
           'your leave from Warsaw without bidding-farewell r.cl. with us'

<sup>18</sup> See *T r u g m a n* (2001) for more discussion of restrictions on the possibility of possessives to bind anaphoric pronouns in Russian. In other Slavic languages, e.g. in Upper Sorbian, possessive adjectives can also control relative pronouns (cf. *C o r b e t t* 1987).

Possessive pronouns or adjectives cannot occur together with agentive adnominal genitives or agentive *przez*-phrases, which indicates that they all fill the same “slot”.

- (33) a. \*Jankowe chrapanie Piotra  
           John.PossAdj snoring Peter.Gen  
       b. \*twoje śpiewanie kolęd przez brata  
           your singing carols.Gen by brother

And finally, possessives in event nominals cannot be used predicatively (as in 34a and 34b). They differ in this respect from non-derived adjectives (e.g. *krótki* ‘short’ in 34c), as well as from a denominal attributive adjective in (34d).

- (34) a. \*To chrapanie było twoje.  
           this snoring was.3SgN your  
       b. \*Wyjazd na wakacje był nasz.  
           leaving on holiday was our  
       c. Wakacje były krótkie.  
           holidays were.3PlF short  
       d. Ten samochód jest japoński.  
           this car is Japanese

The denominal adjective in (34d) belongs to the class of “ethnic” adjectives (also referred to as “thematic” or “group” adjectives). As is argued in Grimshaw (1990) and Alexiadou (1999), ethnic adjectives in English or Greek generally act as modifiers (e.g. *Russian friends*, *French defeats*). Grimshaw (1990) treats them as a-adjuncts when they denote agents, e.g. *the Italian invasion*. Even then, though, they cannot act as antecedents for anaphoric pronouns, e.g. *\*the Italian dislike of themselves*. Thus, Slavic possessive pronouns and possessive adjectives clearly differ from the latter type of adjectives in their syntactic properties.

A question could be asked at this point whether possessive forms occurring in non-event nouns (e.g. *jej książka* ‘her book’) have the status of arguments or modifiers. As is shown in (35), they fail to bind rationale and adverbial clauses, and they can occur in predicative contexts, as would be expected of modifiers.

- (35) a. Ten samochód był mój.  
           this car was my/mine  
       b. ?\*twój list z Warszawy, bez PRO<sub>i</sub> pożegnania się z nami  
           your letter from Warsaw without bidding-farewell r.cl. with us

Trugman (2001) argues (on the basis of similar data from Russian) that Possessors in non-event nominals in Russian (and, similarly, in Polish) are not argumental. However, according to Rappaport (2002), the argumental status can be assigned both to the possessive form *twój* 'your.Sg' in the referential noun *twój brat* 'your brother', and in the event nominal *twój przyjazd* 'your arrival', in spite of their adjectival morphology<sup>19</sup>. In both types of noun phrases possessive forms are referential and can bind anaphoric pronouns, as was shown in (30) above. They differ in this respect from attributive adjectives (e.g. *długi* 'long'), and from "ethnic" adjectives (such as *japoński* 'Japanese').

### 3.5. Summary

In this chapter it was shown that nouns, in particular heads of event nominals, such as *murder* in *John's murder of his wife*, can be regarded as argument-takers. The parallelism was illustrated between syntactic representations of clauses and noun phrases, adopted in various models of generative grammar. It was argued that pre-head possessives can be analyzed as arguments, at least when event nominals are considered. Since the latter claim is particularly controversial in the case of Slavic possessive pronouns and possessive adjectives, additional evidence was adduced to demonstrate their argumental status.

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<sup>19</sup> Moreover, several authors (e.g. Van Valin and LaPolla 1997, Partee and Borschev 2000) assume that Possessors have the status of semantic arguments in the case of material nouns.

## **The event structure of passive nominals**

### **4.1. Introductory**

In this chapter we will discuss issues related to the event structure and argument structure of passive nominals in English and Polish. Section 4.2. investigates the tenability of the hypothesis that passive nominals are not names of (complex) events, hence they do not take arguments (cf. Grimshaw 1990). The link between the aspectual characterization of verbs and the corresponding passive nominals is researched in section 4.3. Section 4.4. compares the event structure of predicates with affected and unaffected objects. The difference in the number of arguments (participants) in two types of passive nominals in Polish and English is analyzed in sections 4.5.-4.7. Longobardi's (2000) hypothesis concerning cross-linguistic differences in the hierarchical structure of noun phrases is discussed, with reference to passive nominals, in section 4.8.

### **4.2. Can English passive nominals be regarded as argument-taking nominals?**

As was mentioned in Chapter 1, some researchers postulate that the derivation of passive nominals in English involves NP movement, i.e. the movement of the Theme argument to the subject position (cf. Chom-

sky 1970, Kayne 1984, Anderson 1983–1984, Giorgi and Longobardi 1991).

Williams (1982), however, assumes that no NP movement applies in noun phrases. He claims that the prenominal possessive in such NPs as *the city's destruction* or *Bill's examination* can have a free thematic interpretation. It can receive any pragmatically accessible thematic role, including the role of Patient, Agent, or Possessor.

Grimshaw (1990) argues, in agreement with Williams (1982), that passive nominals in English cannot be treated as NP counterparts to passive clauses. She claims that passive nominals have no argument structure<sup>1</sup>, so the prenominal possessors cannot have a thematic interpretation. She asserts that English passive nominals, such as *Reagan's defeat*, or *John's humiliation*, are either names of results or names of simple events. She employs the following diagnostics to distinguish between complex event nominals (CENs) and other types of nominals.

- (1) a. Complex event nominals cannot be pluralized, e.g. *\*the doctor's examinations of the patient*.
- b. Complex event nominals do not allow the indefinite determiner *a*, *one* as in *\*They observed an/one assignment of the problem*.
- c. Only complex event nominals can occur with aspectual modifiers such as *for three days*, *in a week*, e.g. *the construction of the building in three weeks*.
- d. Complex event nominals and simple event nominals can occur with phase verbs *begin*, *finish* and with verbs expressing duration, e.g. *the construction of the building began in July 1995 and took ten months*.
- e. Only complex event nominals can occur with agent-oriented modifiers, e.g. *intentional in the instructor's intentional examination of the student*.
- f. Complex event nominals cannot occur with possessive modifiers such as *yesterday's*, *today's* in *\*yesterday's defeat of the Europeans*.
- g. Only complex event nominals can control purpose clauses, e.g. *the arrest of John to prevent riots*.
- h. A singular result nominal cannot be modified by the adjectives *frequent*, *constant*, e.g. *\*the politician's frequent/constant nomination*.
- i. Result nominals cannot occur as objects of the verbs *watch*, *observe*, e.g. *\*We watched the destruction* vs. *We watched the destruction of the city*.
- j. Agentive adjuncts cannot occur with result nominals, e.g. *\*the building by the Americans*.
- k. Nominals which unambiguously belong to complex event nominals must realize syntactically their arguments, hence the unacceptability of the phrase *\*the felling* lacking its internal argument of *the trees*.

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<sup>1</sup> Grimshaw (1990) argues that her claim is supported by the impossibility of unambiguously argument-taking nominals, such as *-ing* nominals in English, to occur with proposed Themes, as in *\*the tree's felling*, *\*the city's destroying*.

With respect to nominalizations of Object Experiencer verbs, Grimshaw (1990) clearly states that they must denote results (i.e. emotional states resulting from a particular eventuality), as in *John's embarrassment at his wife's behaviour*. The satellites occurring with such nominals are regarded as modifiers, i.e. *Mary's* and *of the bystanders*.

- (2) a. Mary's embarrassment
- b. the embarrassment of the bystanders

For other passive nominals, she does not make it clear whether they all should be analyzed as result nouns or as names of simple events. She proposes that the nominal *destruction* in *the city's destruction* refers to a state that has come about as a result of an event denoted by the corresponding verb, e.g. *destruction* 'the state of being destroyed'. The lack of the event (process) reading in passive nominals is responsible, according to Grimshaw (1990: 52, 83–84), for the unacceptability of the following phrases and sentences:

- (3) a. \*The city's destruction was awful to watch.
- b. \*the politician's frequent/constant nomination
- c. \*the building's construction in only three weeks
- d. \*the building's intentional construction
- e. \*The building's construction began last week.
- f. \*Mary's nomination in order to increase the participation of women on the committee

It will be argued below that, while English passive nominals often denote results, they can also occur as argument-taking nominals denoting events, i.e. as names of complex events (CENs) in Grimshaw's terminology.

If we look at other studies of English nominals (Roberts 1987, Roeper 1987, 1993, Safir 1987, Tenny 1994, Taylor 1996, Snyder 1998) we find that their authors allow for the possibility of the event reading with English passive nominals. They provide examples of English passive nominals occurring as objects with the verbs *take place*, *begin*, *watch*, *film* and *finish*, and with temporal expressions (such as *at 3 a.m.*). Further examples of this type can be found in electronic corpora (e.g. electronic versions of English dictionaries, weeklies and newspapers).

- (4) a. John's arrest by the authorities (?nude) took place at 3.00 a.m. (= Safir 1987, ex. 46b)
- b. (...) to mark the power station's renaming by Margaret Thatcher in June 1988 (*Independent*)

- c. Tibet's colonization by China began in the nineteenth century.
- d. Watson's execution was filmed by three TV stations.
- e. The building's reconstruction will be finished in a month.

As illustrated in (4), some passive nominals occur with *by*-phrases. However, the application of the *by*-test (as a diagnostic of the CEN status) is difficult in English. Grimshaw argues that some *by*-phrases are adjuncts (e.g. *the construction of the bridge by the soldiers*), while other *by*-phrases are modifiers (e.g. *a book by Chomsky*, *the city's destruction by the enemy*). Let us observe, however, that if we followed Grimshaw (1990) and regarded English passive nominals as non-argument taking (i.e. names of results or simple events), we would be forced to treat the prenominal possessives as modifiers which have free thematic interpretation (as in Williams 1982). This would mean that *John* in *John's arrest* should be ambiguous between various readings, e.g. 'the arrest that John witnessed', 'the arrest that John described (in a newspaper)', 'the arrest that he made', and 'the arrest that he suffered'. The fact that *John* is unambiguously interpreted as the undergoer (Patient) remains unexplained.

Passive nominals in (5) below exhibit other properties of complex event nominals. They can be modified by agent-oriented adjectives (in 5a), and combine with aspectual modifiers (in 5b, c).

- (5) a. the city's deliberate destruction (= Roberts 1987, ex. 152b)
- b. The books' publication by Mouton in a month surprised the author. (= Tenny 1994, ex. 56)
- c. The poems' translation by John in just five minutes surprised the professor. (= Tenny 1994, ex. 56)

Consequently, it can be argued that the complex event reading is available for (at least some)<sup>2</sup> passive nominals, such as those in (4) and (5) above.

We assume, following Roberts (1987: 245 ff.), that the result reading is preferred (though not obligatory) for passive nominals. The fact that the event reading is not central<sup>3</sup> with passive nominals partly accounts

<sup>2</sup> Rozwadowska (1997) postulates that the nominals related to Object Experiencer verbs denote single-participant eventualities, hence the lack of the agent argument and the process reading in the phrase *\*the stories' annoyance of John*. In contrast, Pesecky (1995: 72) argues that *annoyance* and *humiliation* are argument-taking event nominals related to noncausative predicates, i.e. 'be annoyed', 'be humiliated'.

<sup>3</sup> The distinction between central and unestablished senses of words is discussed in Cruse (1986: 79 ff.).



for variation in acceptability judgements provided by native speakers of English for noun phrases such as those in (4) and (5)<sup>4</sup>.

When discussing English passive nominals, Snyder (1998) postulates that, apart from the result reading, they can exhibit the simple event reading, the complex event reading and the propositional reading<sup>5</sup>. In contrast to Grimshaw (1990), he distinguishes two types of argument-taking nominals: complex event nominals (CENs) and propositional nominals. As argued in Vendler (1967), English verbal gerunds obligatorily denote propositions, and are paraphrasable as "the fact that..." or "that...". In contrast to complex event nominals in (7), propositional nominals in (6) cannot occur as subjects of the verbs *occur*, *take place*, or as objects of the verbs of perception (*witness*, *watch*). They are incompatible with temporal adverbials denoting duration, e.g. *for a week*. They cannot be pluralized or quantified, either (while names of simple events can).

- (6) a. \*The department's electing of John occurred last year. (propositional nominal)
- b. \*The fact that the department elected John occurred last year.
- c. \*We all witnessed the department's electing of John.
- d. \*the department's reorganizing of the filing system for a week
- e. \*the department's electings of John
- f. \*several/three electings of John
- (7) a. The department's election of John occurred last year. (CEN)
- b. We all witnessed the department's election of John.
- c. the reorganization of the filing system for a week

Snyder (1998) argues that true CENs are incompatible with the aspectual modifiers *frequent* and *constant*. He asserts that only propositional nominals can be accompanied by such modifiers, as is illustrated by his data quoted below:

- (8) a. The department's frequent/constant election of John surprised the dean. (propositional nominal)
- b. The department's (\*frequent/\*constant) election of John occurred last year. (CEN)

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<sup>4</sup> Some native speakers of English (whom I have consulted) find passive nominals confusing and distracting. Such nominals contradict the listener's expectation of the possessive expressing the agent. Consequently, the phrase *China's colonization of Tibet* may be perceived as preferable to *Tibet's colonization by China*. Other speakers tend to interpret passive nominals as names of states, hence incompatible with agent-oriented modifiers, such as *deliberate*.

<sup>5</sup> Snyder (1998) is not concerned with the result reading of passive nominals.

If we modify Grimshaw's typology of nominals along the lines of Snyder (1998), we could regard the passive nominals quoted in (5b) and (5c) above as propositional, rather than event, nominals. They occur as subjects of the verb *surprise* and are paraphrasable as "the fact that" (e.g. *The fact that the books had been published by Mouton in a month surprised the author*). Nevertheless, no matter whether the passive nominals given in (4)–(5) above are analyzed as names of propositions or names of complex events, they are clearly argument-taking nominals.

### 4.3. Aspectual classes of verbs and their nominalizations

As was mentioned above, argument-taking nominals are referred to in Grimshaw (1990) as CENs (complex event nominals). Nominals which take no arguments (and can occur with optional "complements") are treated as names of results or as SENs (simple event nominals). Complex event nominals, apart from being argument-takers, preserve aspectual properties of related verbal predicates.

Following Vendler (1967), Grimshaw identifies four aspectual classes of verbs<sup>6</sup> in English, frequently referred to as *Aktionsart* classes (cf. also Dowty 1979, Pustejovsky 1988, Van Valin 1990, and Van Valin and LaPolla 1997):

- (9) a. states: *fear, dislike, know, love, see*;
- b. activities: *cry, travel, walk*;
- c. achievements: *arrive, shatter, pop*;
- d. accomplishments: *build, create, destroy, learn, melt*

States and activities are internally homogenous. States are non-dynamic, while the remaining eventualities are dynamic. Achievements and accomplishments denote telic events, since they imply some end point. Accomplishments denote telic events of some duration, while achievements denote punctual events (perceived as having no or little duration). The meanings of particular *Aktionsart* classes of verbs can be paraphrased by means of primitive elements. The following logical structures are proposed for aspectual classes of verbs in Van Valin and LaPolla (1997: 102):

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<sup>6</sup> The addition of adverbials, prepositional phrases or direct objects frequently results in a change of the aspectual category of a given verb (cf. Van Valin and LaPolla 1997).

- (10) a. state: **predicate'** (x) or (x, y)  
 b. activity: **do'** (x, [**predicate'** (x) or (x, y)])  
 c. achievement: INGR **predicate'** (x) or (x, y)  
 d. accomplishment: BECOME **predicate'** (x) or (x, y)

Predicates are represented in (10) in boldface followed by a prime. INGR and BECOME are modifiers of predicates. INGR (from 'ingressive') denotes an instantaneous change, while BECOME encodes a change extended over some time. Van Valin and La Polla (1997) assume that logical structures for activities contain the generalized activity predicate **do'**. The logical representations for all causative eventualities (irrespective of their *Aktionsart* type) include the operator CAUSE. (10d) corresponds to a non-causative accomplishment, e.g. the intransitive predicate *dry* in *Her hair dried quickly*. The representation of a causative accomplishment, e.g. the transitive verb *dry* in *Jane dried her hair (with a hair dryer)*, includes, according to Van Valin and La Polla (1997), the operator CAUSE and the generalized activity predicate **do'**:

- (11) Jane dried her hair.  
 [**do'** (Jane, Ø)], CAUSE [BECOME **dry'** (hair)]

As shown in (12), accomplishment predicates can be decomposed into simple predicates (cf. Dowty 1979, Pustejovsky 1988, Van Valin 1990, Trugman and Cetnarowska 2001). As in Trugman and Cetnarowska (2001), the operator BECOME is used as an umbrella term, encoding both punctual changes of state (i.e. INGR in Van Valin and La Polla 1997), and changes over some temporal span (i.e. BECOME in Van Valin and La Polla 1997).

- (12) a. accomplishment:  $\phi$  CAUSE  $\psi$ , where  $\phi$  is an activity predicate and  $\psi$  an achievement predicate  
 b. activity: (DO (x)) [**predicate'** (x) or (x, y)]  
 c. achievement: BECOME **predicate'** (x) or (x, y)

Consequently, the event structure of an accomplishment predicate (and a related CEN) is binary branching<sup>7</sup>, as in (13).

- (13)
- ```

      event
     /  \
  activity  achieved state
  
```

<sup>7</sup> The binary event structure can also be postulated for achievements (cf. van Hout 1996).

Although Grimshaw (1990) is concerned mainly with complex event nominals related to accomplishment verbs, other types of verbs can also give rise to event nominals which inherit their argument structure and event structure (cf. Rozwadowska 1997, Trugman and Engelhardt 1997).

As was mentioned in the previous section, while Grimshaw (1990) treats passive nominals as names of results, Snyder (1998) argues that English passive nominals CAN (sometimes) exhibit the complex event reading. Snyder (1998) highlights the puzzling contrast between his acceptability judgments for the following sentences:

- (14) a. If the barbarians' destruction of the city continues for another week, little will remain.
- b. If the destruction of the city (by the barbarians) continues for another week, little will remain.
- c. ??If the city's destruction (by the barbarians) continues for another week, little will remain.
- (15) a. If the reorganization of the filing system continues, I'll never be able to find anything.
- b. ??If the filing system's reorganization continues, I'll never be able to find anything.

He suggests that, when English passive nominals occur in their complex event reading, they denote the culmination<sup>8</sup>, rather than the activity phase, of the related accomplishment predicate. Therefore, the sentences in (14c) and (15b), in which the nominals denote an activity phase, are degraded according to him.

Since Snyder's hypothesis makes interesting predictions, it will be adopted here for English nominals. It will be further extended to Polish passive nominals. This hypothesis implies, for instance, that passive nominals can be derived only from those predicates that contain a subeventuality denoting change, i.e. from achievements and accomplishments<sup>9</sup>.

It must be admitted that there are some problems for Snyder's analysis. If event passive nominals denote the culmination of an accomplishment, it comes as a surprise that they can occur in contexts which re-

<sup>8</sup> A similar position is taken in Alexiadou (1999: 126 ff.), where it is argued that passive nominals in Greek are event nominals but have a terminative interpretation.

<sup>9</sup> Let us note that Snyder (1998) and Grimshaw (1990) allow only accomplishment predicates to have related passive nominals. However, achievements also denote change, and they can be analyzed as consisting of two subevents.

quire their durative interpretation, e.g. in (4c, 4d), or in the sentences below in (16).

- (16) a. Boris Becker's defeat by Wayne Ferreira was watched in 3.8 mln households. (*The Daily Telegraph*)  
 b. (He) was forced to retire midway through the North's defeat by the All Blacks at Anfield last week. (*The Daily Telegraph*)  
 c. Their delivery took John and Mary five hours. (Mallén 1990: 16)

In order to search for a plausible explanation for the occurrence of passive nominals in durative contexts, such as those in (16), it is useful to investigate the occurrence of verbs of the achievement class in the progressive forms. As observed in, among others Quirk et al. (1985), Smith (1991), and Van Valin and LaPolla (1997), punctual verbs are compatible with the progressive when they denote a "preparatory activity" preceding the change of state (e.g. *The plane was taking off*). The passive nominals in (16) above may similarly be analyzed as referring to the "preparatory activity" (preceding the change of state). Alternatively, we may assume that the nominals in (16) have an iterative interpretation<sup>10</sup>.

The hypothesis formulated in Snyder (1998) with respect to English passive nominals predicts that such nominals describe a culmination point of an action (Parsons 1990), or "(...) the event without concern for its internal structure, especially its duration" in the sense of Smith (1991: 11).

With respect to the Polish data, this hypothesis is confirmed by the morphological shape of "genuine passive nominals", i.e. those which can occur with possessive pronouns denoting first, second or third person. It is particularly useful to look at nominals terminating in *-nie/-cie*, since they generally preserve aspectual properties of their verbal bases, and they can be formed from both perfective and imperfective verbs. Perfective verbs, which are usually prefixed in Polish, denote a telic event which has reached its natural boundary, e.g. *przebudować* 'to rebuild, to renovate.pf', *przenieść* 'to move, shift (sb/sth)'. Imperfective verbs can be either primary/basic stems (e.g. *budować* 'to build. impf') or derived from corresponding perfective verbs by means of DI (Derived Imperfective) suffixation, i.e. by adding the suffixes *-aj-*,

<sup>10</sup> Notice that Snyder (1998) does not regard his examples of passive nominals with the verb *continue* as totally ungrammatical, since he allows for the possibility of the iterative or habitual interpretation of such phrases. We can also regard the nominals in (16) as English "quasi-passive nominals" (see section 4.8.).

-iwa/-ywa-, as in *przebudowywać* 'to rebuild. impf'. They denote either an action in progress or call for a recurrent reading (as in *przebudowywać zamki* 'to rebuild. impf castles'). Let us observe that Polish *-nie/-cie* nominals which can be used as passive nominals are formed from perfective verbs only. The corresponding imperfective nominals do not normally allow the passive reading, as is shown by the contrast in (17) below:

- (17) a. moje odwołanie ze stanowiska  
 my dismissing.pf from post  
 'my being dismissed from (my) post'  
 b. \*moje odwoływanie ze stanowiska  
 my dismissing.impf from post  
 'my being dismissed (recurrently) from (my) post'

The imperfective nominal in (17b) could presumably be accepted in a context which would call for the repetitive interpretation, e.g. *?twoje ciągłe powoływanie na stanowiska i odwoływanie ze stanowisk* 'your being constantly nominated to posts and being dismissed from them'. This, however, is expected of nominals denoting punctual events.

Nominals derived in Polish by the less productive suffixation (e.g. *-acja*, *-ka* or the zero morpheme) typically show the neutralization of the verbal aspect (see Puzynina 1969, Rozadowska 1997). For instance, the event noun *budowa* 'building' resembles the imperfective verb *budować* 'to build.impf' in form, whereas *przebudowa* 'rebuilding' is related formally to the perfective verb *przebudować* 'to rebuild.pf'. For those passive nominals which do not overtly signal aspectuality by their morphological shape, Trugman and Cetnarowska (2001) resort to standard aspectual tests to show that they refer to the culmination point. As illustrated in (18), punctual events are incompatible with durative modifiers (e.g. *przez trzy godziny* 'for three hours') and predicates (e.g. *trwać* 'to last').

- (18) a. \*jego porwanie przez trzy godziny  
 his kidnapping for three hours  
 b. \*Twój wybór na prezydenta miasta potwał niedługo.  
 Your choice on president town.Gen lasted not-long

"Quasi-passive nominals", i.e. those which occur with objective possessives denoting the third person only, can denote both the culmination point and the on-going activity (cf. 19a and 19b below).

- (19) a. Podczas ich budowania, trzy razy zmieniali się właściciele.  
 during their building.impf three times changed.Pl r.cl. owners.Nom  
 b. Od ich wybudowania w 1993 roku, oba hotele stoją nieużywane.  
 since their building.pf in 1993 year both hotels stand unused  
 'Since they were built in 1993, both hotels have been standing unused'.  
 c. Podjęto decyzję o zburzeniu hotelu w rok  
 made.impers. decision about pulling-down hotel in year  
 po jego zbudowaniu.  
 after its/his building.pf  
 'A decision was made to pull down the hotel a year after it had been built'.

"Quasi-passive *-nie/-cie* nominals" are formally related either to perfective or imperfective verbs. Consequently, they are compatible either with aspectual modifiers of the *for an hour* type or *in an hour* type. They can be related to achievement predicates (e.g. *zbić szklanę* 'to break a glass'), activity predicates (*oglądać film* 'watch a/the film'), or accomplishment predicates (*napisać książkę* 'to write a/the book').

- (20) a. (Marek zbił szklanę w pokoju hotelowym. 'Mark broke a glass in the hotel room'.)  
 Za jej zabicie, dopisano nam dwa złote do rachunku.  
 for its breaking.pf wrote.impers us.Dat two zlotys to bill  
 'Because it was broken, two zlotys were added to (our hotel) bill'.  
 b. Udało mi się opublikować tę książkę dopiero  
 managed me.Dat r.cl. publish this book.Acc only  
 dwa lata po jej napisaniu.  
 two years after its writing.pf  
 'I managed to publish this book only two years after it had been written'.  
 c. (Ten film zawiera wiele brutalnych scen. 'This film contains many violent scenes'.)  
 Nie zachęcaj dzieci do jego oglądania.  
 not encourage.Imper children.Gen to its watching  
 'Do not encourage (the) children to watch it'.

There seem to be no further restrictions on the aspectual type of the verb from which "quasi-passive nominals" are formed in Polish, other than those resulting from the requirement that the verb be transitive (and the eventuality should be causative).

#### 4.4. Affectedness as an aspectual (i.e. event structure) property

Doron and Rappaport-Hovav (1991) refer to event structure<sup>11</sup> of predicates to account for the Affectedness Constraint on English nominals. They propose that the formation of passive nominals (and middles) involves the elimination of the external argument of the predicate, and the lexical externalization of the internal argument. This is possible for predicates with the “separation” property. These are accomplishment predicates in which the achievement sub-eventuality contains only one participant, i.e. the internal argument. This is the case with the predicate *distribute*, as illustrated in (21) below. The predicate in question takes two arguments, the external one with the thematic role of Agent (Causer), and the internal one with the thematic role of the affected Theme (Patient). It can give rise to a passive nominal, e.g. *the money's distribution*.

- (21) a. predicate with the separation property  
 argument structure: distribute ( $\bar{x}$ , y)  
 event structure: CAUSE (DO (x), BECOME (distributed (y)))

The verb *transfer* in (22a) is another example of a predicate with the separation property, which is predicted to allow for a passive nominal (i.e. *the money's transfer*). For accomplishment predicates which lack the separation property (and hence, may be interpreted as taking “unaffected” internal arguments), the internal and external arguments are both present in the achievement subeventuality. This is illustrated in (22b) for the predicate *bring*, which cannot give rise to the passive nominal (cf. *\*money's bringing*).

- (22) a. *transfer*  
 event structure: CAUSE (DO (x), BECOME (AT (y, z)))  
 argument-structure: (x, y, to z)  
 passive nominal: money's transfer  
 b. *bring*  
 event structure: CAUSE (DO (x), BECOME (WITH (AT (x, z), y)))  
 argument-structure: (x, y, to z)  
 passive nominal: \*the money's bringing

<sup>11</sup> The position taken in Doron and Rappaport-Hovav (1991) differs from that of Grimshaw (1990: 94), who suggests that the difference between the affected objects and unaffected objects cannot be captured at the level of event structure or argument structure, but must be represented at the lcs (lexical-conceptual structure) representation. In contrast, Tenney (1994) analyzes affectedness as an aspectual property. She assumes that affected objects denote incremental themes.



As is pointed out in Alexiadou (1999: 137), the analysis outlined in Doron and Rappaport-Hovav (1991) predicts that the Theme argument of passive nominals does not behave in exactly the same way as the Theme argument in “active” nominals. For instance, in active nominals the object-type argument can be predicated of a resultative phrase (i.e. *apart*), while this is not possible in passive nominals.

- (23) a. the collapse of the building apart  
 b. \*the building’s collapse apart

The data in (23), quoted from Alexiadou (1999), support the view that passive nominals in English denote single-participant eventualities and their derivation involves no syntactic NP movement.

The distinction between predicates with the separation property and those without the separation property can be exploited for the analysis of “genuine passive nominals” in Polish. Moreover, it can be shown that “genuine passive nominals” in Polish, such as *wasze aresztowanie* ‘your being arrested’, resemble English passive nominals in being argument-taking (complex event) nominals and in denoting single-participant eventualities.

In recent years there have been further modifications of the event structure representations of predicates postulated in the work of Malka Rappaport-Hovav and Beth Levin. Rappaport-Hovav and Levin (1998) (henceforth abbreviated as RH&L) have argued for a difference between syntactic arguments and participants at the level of event structure. They propose that the number of structure participants associated with a given predicate is determined by the event template of the eventuality denoted by the predicate. This is captured by, among others, the condition quoted below:

- (24) Argument Realization Condition (RH&L 1998: 113):
- a. There must be an argument XP in the syntax for each structure participant in the event structure.
  - b. Each argument XP in the syntax must be associated with an identified sub-event in the event structure.

The number of structure participants corresponds (roughly) to the number of subevents in the event template. Since accomplishments consist of two subevents (i.e. the activity subevent and the change of state subevent), they license two structure participants (e.g. Agent and Patient). Activities and states allow only for single structure participants since there is only one subevent, hence one variable, in their event templates.

While differences between logical structures for various aspectual classes of predicates were discussed in section 4.3. (following Van Valin and La Polla 1997), for the clarity of presentation we will give below event templates for the relevant *Aktionsart* classes of verbs employed in RH&L (1998)<sup>12</sup>.

- (25) a. causative accomplishment: [[ x ACT<sub><MANNER></sub>] CAUSE [ BECOME  
[ y <STATE> ]]] (two variables, x and y)  
b. activity: [[ x ACT<sub><MANNER></sub>]  
c. state: [ x <STATE>]  
d. achievement: [ BECOME [ x <STATE> ]]

In the theory outlined in RH&L (1998), predictions concerning the number of participants follow also from particular idiosyncratic semantic properties of predicates, i.e. from the so-called constants. Constants are associated with phonological strings (e.g. CUT, SWEEP, ANNOY) and they determine the number of (constant) participants associated with a given event. According to RH&L, the predicate SWEEP in the sentence *Mary swept the floor* denotes an activity, hence its event template licenses one structure participant (with the role of Agent). The number of participants associated with the constant is higher: the semantics of SWEEP predicts the existence of someone who sweeps and the thing (the surface) being swept. A participant which is associated with a constant but is not matched up with the structure participant is referred to as “constant participant”. It can be realized syntactically either as an argument or a modifier, e.g. it surfaces as the direct object in the sentence *Mary swept the floor*. It does not have to be realized syntactically, for instance if it is recoverable from the context (as in the sentence *Mary swept all day*).

The difference between predicates with the separation property and those without the separation property can be restated, within the theory of RH&L (1998), as a difference in the number of structure participants required by a given predicate. Levin (1998) suggests that unaffected object-type arguments are realizations of constant participants. In other words, the verb *destroy* licenses two structure participants, hence its participant with the role of Patient can surface in the pre-head position in the deverbal nominal *the city's destruction*. Moreover, we would predict the availability of the middle construction, e.g. *These documents destroy easily*.

<sup>12</sup> Notice that achievements are analyzed in (25) as associated with single event variable. However, if we follow the position of Van Valin and La Polla (1997), we can recognize the occurrence of causative achievements (e.g. *pop* in *The cat popped the balloon*), associated with two participants.

However, in the course of the discussion of affectedness in the present monograph we will refer to the notion of "the separation property" taken from Doron and Rappaport-Hovav (1991), rather than to the distinction between constant and structure participants.

One of the reasons for this conservatism is the fact that the theory outlined in Rappaport-Hovav and Levin (1998) is constantly being developed, hence controversies arise concerning some of its aspects. The identification of structure participants is particularly difficult in the case of psych verbs, i.e. predicates denoting emotions and cognition. In a careful study of the aspectual properties of Polish and English psych verbs, Biały (2004) postulates that the predicates in question should be divided into three classes which differ in their event structure and the number of structure participants.

- (26) a. Subject Experiencer (SubjExp) verbs, e.g. Polish *lubić* 'like', *znać* 'know', *kochać* 'love', English *hate*, *fear*;  
 b. stative Object Experiencer (ObjExp) verbs, e.g. Polish *fascynować* 'fascinate', *martwić* 'worry', *wzruszać* 'affect, touch', English *worry*, *bore*, *depress*;  
 c. non-stative Object Experiencer (ObjExp) verbs, e.g. Polish *przerażać* 'frighten', *irytować*, *denerwować* 'irritate', English *frighten*, *irritate*.

Biały (2004) concludes that it is only the third group of psych predicates, i.e. non-stative ObjExp verbs, which denote complex events and license two structure participants. SubjExp verbs and stative ObjExp verbs denote simple events and license only one structure participant (which bears the role of Experiencer).

In order to argue for the simple or complex event status of Experiencer verbs, Biały (2004) uses a battery of aspectual tests, diagnosing the stative or non-stative character of a given predicate. For instance, he states that SubjExp are unable to license temporal adverbials (as in *\*Tomek kochał Marię o piętej*. 'Tom loved Mary at five o'clock') and are odd with quantificational adverbials (cf. *??Maria czasami lubi lody*. 'Mary sometimes likes icecream'). He shows that eventualities denoted by SubjExp verbs are homogenous and cumulative. Their event template consists of one subevent, hence it has only one variable for a structure participant.

Biały (2004) employs the insights from RH&L (1998, 1999) as well as from the study of psych verbs in, among others, Pesecky (1995) and Arad (1998). He recognizes the distinction between temporally dependent and temporally independent events, postulated in Rappaport-Hovav and Levin (1998, 1999).

Events denoted by stative ObjExp verbs, such as *martwić* 'worry', consist of two subevents, i.e. the causing subevent and the resulting state.

However, these subevents are claimed to be temporally dependent. Stative emotions (such as worrying or depression) are true only when the stimulus of those emotions is in the focus of the Experiencer's attention. The conflation of two temporally dependent coidentified events gives rise to a simple event structure. Therefore, predicates denoting stative emotions license only one structure participant (i.e. Experiencer).

In contrast, non-stative ObjExp verbs, e.g. English *irritate*, or Polish *przerażać* 'frighten', denote two temporally independent events, i.e. the causing subevent and the resulting emotion. They are associated with two structure participants.

To show that the subevents of eventualities denoted by stative ObjExp verbs are temporally dependent, while those denoted by non-stative ObjExp verbs are temporally independent, Biały (2004) employs, among others, the test with the adverbial *prawie* 'almost'. In the case of temporally independent events, e.g. subevents of the eventuality of irritating or frightening, the adverbial *prawie* 'almost' can modify either the causing subevent or the resulting subevent. In other words, the sentence in (27) below is ambiguous between the two readings: either Tom almost did something that would frighten Mary, or the emotion of being frightened almost holds.

(27) *Tomek prawie przeraził Marię.* 'Tom almost frightened Mary'.

In the case of eventualities denoted by stative ObjExp verbs, e.g. *fascynować* 'fascinate' in (28), Biały argues that the adverbial *prawie* 'almost' can modify only the resulting emotion (i.e. the audience were almost fascinated).

(28) *Aktorzy prawie zafascynowali widzów.* 'Actors almost fascinated the audience'.

Unfortunately, the identification of stative ObjExp verbs (in English or Polish) as allowing for one structure participant and non-stative ObjExp verbs as licensing two structure participants does not correlate with the (un)availability of such verbs in the middle construction in English. As was mentioned above, Levin (1998) reinterprets the difference between verbs with affected objects and unaffected objects as a distinction between predicates licensing two structure participants (e.g. Experiencer and Stimulus/Neutral) and predicates licensing a single structure participant (e.g. Experiencer). The former type of verbs should be able to occur in the middle construction in English (since these are the verbs with the "separation property") while the latter type of verbs should be infelicitous as middles. This hypothesis is confirmed by the be-

haviour of non-stative Experiencer verbs – notice that the verb *frighten* is felicitous in (29).

(29) *Mousebirds frighten easily and seek hiding places.*

However, it gives incorrect predictions for stative ObjExp verbs, such as *bore*. Although the verb *bore* licenses only one structure participant (which might suggest that it has no “separation property” and takes an unaffected object), it is fully acceptable in the middle construction in (30):

(30) *Kids bore easily.*

Therefore, in the discussion to follow we will not make direct reference to the number of constant and structure participants associated with verbs which give rise to passive nominals in English or Polish. Instead, we will try to determine whether there is a syntactically active, though not overtly expressed, external argument (which typically bears the role of Agent). We will refer to English passive nominals (e.g. *Mary's seduction*) and “genuine passive nominals” in Polish (e.g. *wasze aresztowanie* ‘your arrest’) as denoting single-argument and single-participant eventualities, since the activity subevent is lacking in their event structure, and there is only the resulting state subevent with the Patient participant.

#### 4.5. “Genuine passive nominals” in Polish as denoting single-participant eventualities

As is shown in Trugman and Cetnarowska (2001), prenominal possessives in “genuine passive nominals” (in Polish and Russian) pass the standard tests for argumenthood (cf. Bosque and Picallo 1996, Alexiadou 1999). They cannot occur in predicative positions (cf. 31). They cannot be omitted (cf. 32a), unless they are coreferential with the subject DP (cf. 32b). They cannot be replaced by denominal attributive adjectives (cf. 33).

- (31) a. \*Ostatnie przyjęcie do pracy było nasze.  
           last           admittance to work was our  
       b. \*Ja uważam to uniewinnienie za twoje.  
           I    consider this acquittal       as your.Sg

- (32) a. ?Uslyszyliśmy o wydaleniu ze szkoły.  
 'We heard about expulsion from school'.  
 b. Cieszyliśmy się z przyjęcia do pracy.  
 rejoiced.1Pl r.cl. with admittance to work  
 'We rejoiced at (our) being admitted to work'.
- (33) a. \*studenckie wydalenie  
 student.Adj expelling (in the sense of 'the expulsion of the student')  
 b. \*złodziejskie aresztowanie  
 thief.Adj arresting (in the sense of 'the arrest of the thief')

Trugman and Cetnarowska (2001) propose to treat the "genuine passive nominals" in Polish (and also in Russian) as the so-called "simplex event nominals". Apart from lacking the activity subeventuality on their event template (as proposed in Snyder 1998 for English), they lack the syntactic projection of the external causer (i.e. the agent) argument. The argument with the thematic role of agent is present on the lexical-conceptual structure (LCS) of the corresponding verb and it is existentially quantified. Some agent or causer is always presupposed in passive nominals, e.g. *wasze aresztowanie* 'your being arrested (by someone)'. However, the agent argument is not syntactically projected.

As shown in Trugman and Cetnarowska (2001: 203 ff.), "genuine passive nominals" in Polish fail Grimshaw's diagnostics for complex event nominals which are designed to detect the presence of the external argument. They are incompatible with agent-oriented modifiers (cf. 34a). They cannot control purpose clauses (cf. 34b).

- (34) a. \*wasze celowe przeniesienie na gorsze stanowisko  
 your deliberate moving to worse position  
 'your being moved deliberately to a worse position'  
 b. \*twoje wydalenie z instytutu po to, żeby PRO<sub>i</sub> przyjąć swego<sub>i</sub> syna  
 your expelling from institute in order to employ self's son

When a depictive secondary predicate, e.g. *nago* 'naked', occurs in such nominals, it cannot be predicated of the unexpressed agent argument (cf. 35a). It obligatorily refers to the possessive. This is in contrast to the behaviour of the depictive secondary predicates in verbal nominals with a syntactically active external argument (cf. 35b).

- (35) a. \*O moim aresztowaniu nago dowiedział się komendant  
 about my arresting naked learnt.3SgM r.cl. commander  
 i zwolnił sierżanta za brak ubrania podczas służby.  
 and dismissed sergeant.Acc for lack clothes.Gen during service

Unacceptable on the reading 'The commander learnt about arresting me while naked and he dismissed the sergeant for (his) lack of clothes when on duty'.

- b. Przesłuchiwanie ciebie w stanie upojenia alkoholowego stało się przyczyną oskarżenia sędziego o zaniedbanie obowiązków.  
 r.cl. cause.Instr accusing.Gen judge.Gen about neglecting duties.Gen  
 'Interrogating you while (he was) in the state of alcoholic intoxication became the cause of accusing the judge of neglect of his duties'.

In view of similar data concerning the behaviour of passive nominals in Russian, Schoorlemmer (1995, 1998a) concludes that such nominals are not argument-taking, and they are names of simple events. Trugman and Cetnarowska (2001) draw a different conclusion. They regard "genuine passive nominals" in Polish as argument-taking nominals, which have a single syntactically active participant, i.e. the Patient argument.

Potential counterexamples to the hypothesis that the Agent argument is absent in the argument structure (and in the event structure) of "genuine passive nominals" in Polish may be provided by such data as those in (36–37) below. The occurrence of purpose clauses and agentive adjuncts could be taken as evidence for the existence of an implicit external agent-type argument in such passive nominals.

- (36) Twoje mianowanie na stanowisko wiceministra, po to by  
 your appointment on post deputy-minister.Gen in order to  
 zapewnić koalicji poparcie Partii Pracy  
 secure coalition.Dat support.Acc Party.Gen Labour.Gen  
 'your appointment to the rank of the deputy minister in order to secure the support of the Labour Party for the coalition'
- (37) a. wasze uniewinnienie przez sąd apelacyjny  
 your.Pl acquitting by court appeal.Adj  
 'your being acquitted by the Court of Appeal'
- b. \*nasze uniewinnienie przez ciebie  
 our acquitting by you.Sg

However, the controller of the purpose clause in (36) need not be co-referential with the unexpressed agent. This might be interpreted as a case of thematic control (proposed in Jaeggli 1986). The PP *przez sąd apelacyjny* 'by the Court of Appeal' in (37a), in turn, can be regarded as a Polish equivalent of "affector" *by*-phrases in English. "Affector" *by*-phrases do not express a specific performer of the action. As argued in Fox and Grodzinsky (1998), they can be licensed by the lexical-con-

ceptual structure, by-passing the predicate-argument structure (hence their status corresponds to that of modifier *by*-phrases discussed in Grimshaw 1990 as occurring in *a book by Chomsky*).

Given the relatively small number of "genuine passive nominals" in Polish, we can assume that their derivation is a lexical process, which involves the demotion of the external argument, and the promotion of the internal argument. Since they have only one argument (i.e. the internal one), it can be syntactically realized as a prenominal possessor.

#### 4.6. "Quasi-passive nominals" in Polish as argument-taking nominals denoting two-participant eventualities

"Quasi-passive nominals", i.e. nominals which contain the third person possessive pronoun with the objective reading, behave in all respects like argument-taking nominals, i.e. like Grimshaw's complex event nominals. As shown in Cetnarowska (1997), and illustrated below, nominals of this type cannot be pluralized. If we adopted the split of argument-taking nominals into propositional nominals and complex event nominals, suggested in Snyder (1998), the nominals in (38a, 38c) below, and in (39) would be identified as names of propositions.

- (38) a. Zdecydowaliśmy się na ich opublikowanie.  
 decided.1Pl r.cl. on their publishing.Perf  
 'We decided to publish them'.  
 b. \*Zdecydowaliśmy się na ich opublikowanie.  
 decided.1Pl r.cl. on their publishing.PerfPl  
 c. regularne ich zażywanie  
 regular their taking.Imperf  
 'the regular taking of them'  
 d. \*regularne ich zażywania  
 regular their taking.ImperfPl

When in singular, "quasi-passive nominals" can occur with the adjectives *częsty* 'frequent', *ciągły* 'continual' and *stały* 'constant'.

- (39) a. Krople do nosa mogą przynieść chwilową ulgę, lecz częste ich używanie prowadzi do zapalenia błon śluzowych nosa.  
 'Nose drops can bring momentary relief but their frequent use (lit. frequent their using.Imperf) leads to the inflammation of mucous membranes of the nose'.



- b. Ach, te telefony! *To ciągle ich odbieranie* nawet świętego mogłoby zdenerwować!  
 'Well, these telephones! Answering them constantly (lit. this constant their answering.Imperf) would drive even a saint person mad!'
- c. Konfliktów nie da się uniknąć, *ale stale ich prowokowanie* niszczy dobrą atmosferę w grupie.  
 'Conflicts cannot be avoided but provoking them constantly (lit. but constant their provoking.Imperf) destroys the good mood in the group'.

In the examples below "quasi-passive nominals" exhibit the complex event reading, since they can occur with phase verbs, e.g. *rozpocząć* 'to begin', *zakończyć* 'to end, to finish' and verbs denoting duration, e.g. *trwać* 'to last'.

- (40) a. Jak długo trwało *ich rozbrajanie*?  
 how long lasted.3SgN their disarming  
 'How long did it take to disarm them?'
- b. Kiedy wreszcie rozpoczniecie *ich nadawanie*?  
 when finally begin.Fut2Pl their broadcasting  
 'When ever will you begin to broadcast them?'
- c. Zostaniemy powiadomieni o *zakończeniu ich podliczania*.  
 Become.Fut1Pl informed.P1M about finishing their counting  
 'We will be informed when the counting of them has been completed'.

Such nominals can also accompany the verb *obserwować* 'watch closely, observe'.

- (41) a. Nasi przedstawiciele będą obserwować oddawanie głosów *i ich końcowe podliczanie w Sejmie*.  
 'Our representatives will watch the voting and the final counting of the votes (lit. their final counting.Imperf) in the Sejm (i.e. the Polish House of Commons)'.
- b. Obserwowaliśmy odmrażanie zarodków *i ich wszczepianie do macicy*.  
 'We watched the defrosting of foetuses and the implanting of them (lit. and their implanting.Imperf) in the uterus'.

The objective possessives in (38–41) are argumental, since their omission usually leads to the ill-formedness of the resulting nominals (perceived as being incomplete), as shown in (42):

- (42) a. \*Konfliktów nie da się uniknąć, *ale stale prowokowanie* niszczy dobrą atmosferę w grupie.  
 '?Conflicts cannot be avoided but provoking constantly destroys the good mood in the group'.

- b. \*Obserwowaliśmy wszczepianie do macicy.  
'?We watched the implanting in the uterus'.

The omission of the objective possessives is acceptable in the case of co-ordination, i.e. when they are coreferential with a preceding lexical noun phrase or a possessive pronoun.

- (43) a. Obserwowaliśmy odmrażanie zarodków i wszczepianie do macicy. (= 43b)  
'We watched the defrosting of foetuses and the implanting (of them) in the uterus'.  
b. Obserwowaliśmy ich odmrażanie i wszczepianie do macicy.  
'We watched the defrosting of them and the implanting (of them) in the uterus'.

Finally, the external argument is syntactically active in passive nominals of this type. It can license agentive *by*-phrases (cf. 44a, b) and agent-oriented modifiers such as *celowy* 'intentional', or *umyślny* 'deliberate' (cf. 44c, d). It can control into purpose clauses (cf. 45a-c), bind the anaphoric pronoun in (45b), and be coreferential with the reflexive pronoun *swój* 'self's' (cf. 45c).

- (44) a. (...) rząd niemiecki ma zamiar zawrzeć układ z Polską (...) oraz doprowadzić do jego ratyfikowania przez parlament. (*Gazeta Wyborcza*)  
'(...) the German government intends to conclude a treaty with Poland (...) and to secure its ratification (lit. to its ratifying) by the parliament'.  
b. liczne przypadki ich fałszowania przez hurtowników napojów alkoholowych  
'numerous cases of falsifying them (lit. of their falsifying) by wholesalers dealing in alcoholic beverages'  
c. ich celowe przeniesienie na późniejszą godzinę  
their intentional moving to later hour  
'the intentional moving of them (e.g. TV programmes) to a later hour'  
d. ich umyślne prowokowanie  
their deliberate provoking  
'the deliberate provoking of them'
- (45) a. regularne jego zażywanie po to, by zwiększyć odporność organizmu  
regular its taking for this to increase immunity organism.Gen  
'taking it regularly in order to increase the immunity of the body (to diseases)'  
b. wcześniejsze ich<sub>i</sub> wypróbowanie na sobie<sub>k</sub> dla uniknięcia niespodzianki  
earlier their testing on oneself for avoiding surprise.Gen  
'testing them on oneself earlier in order to avoid (the) surprise'  
c. liczne przypadki ich<sub>i</sub> fałszowania dla zwiększenia swoich<sub>k</sub> zysków  
numerous cases their falsifying for increasing self's profits  
'numerous cases of falsifying them in order to increase one's own profit'

In view of the data given above, we think it justified to analyze “pseudo-passive nominals” in Polish as denoting two-argument and two-participant eventualities. One of the participants is overtly realized syntactically (and can carry the role of Patient), whereas the other Agent-type participant is not expressed overtly but is present in the event structure and the argument structure (since it is syntactically active).

In the immediately following section we will show that “quasi-passive nominals” occur in English.

#### 4.7. The exceptions to the Affectedness Constraint and “quasi-passive nominals” in English

Taylor (1994, 1996) brings to light some highly interesting exceptions to the Affectedness and the Experiencer Constraints in English.

The phrases in (46), originally given in Rappaport (1983), and repeated in Giorgi and Longobardi (1991), Rozwadowska (1988) and Taylor (1996), are unacceptable by virtue of violating the Affectedness, or Experiencer, Constraints:

- (46) a. \*the history’s knowledge  
 b. \*the event’s recollection  
 c. \*the problem’s perception  
 d. \*the picture’s observation  
 e. \*the novel’s understanding  
 f. \*the film’s enjoyment

Taylor (1996: 223) shows that the replacement of the possessor nominal by a pronoun (*its, their*) improves the acceptability of such phrases.

- (47) a. its knowledge  
 b. their recollection  
 c. its perception  
 d. its observation  
 e. its understanding  
 f. its enjoyment

He regards the phrases in (47) as well-formed, in contrast to Zubizarreta (1987: 78), who marks such phrases as ungrammatical, and juxtaposes them with their fully acceptable equivalents in Spanish.

- (48) a. \*its understanding  
 b. su comprensión (Spanish equivalent of 48a)  
 c. \*its discussion  
 d. su discusión (Spanish equivalent of 48c)  
 e. \*its memorization  
 f. su memorización (Spanish equivalent of 48e) (from Zubizarreta 1987)

Taylor (1996: 225) reports the occurrence of several phrases with unaffected possessors in the LOB KWIK Concordance, such as those in (49) below:

- (49) a. This conviction of the superhuman (...) found *its visible expression* in offerings, sacrifices to the spirit or deities.  
 b. Sometimes criticism is in the form of protest; at others, it simply experiments with emotions and *their expression* in unusual forms.  
 c. slogans, *whose repetition* pleases those who use them  
 d. sexual perversion, *whose naming* fifty years ago would have made a book suspect

Further examples of phrases which are quoted in the literature as unacceptable due to the Affectedness Constraint are given in (50):

- (50) a. \*the police's avoidance (by John)  
 b. \*the book's/its discussion (by John)  
 c. \*the formula's/its memorization (by the student)  
 d. \*the cat's/its pursuit (by John)  
 (examples from Zubizarreta 1987: 43)  
 e. \*the job's loss (by John) (from Guasti 1996)

The data in (51) are quoted below from Cetnarowska (1998b). The following phrases and sentences, which exemplify violations of the Affectedness Constraint, were culled from the *Oxford English Dictionary* and international newspapers in the electronic form.

- (51) a. (...) requires for *its understanding* the consideration of the issues (OED)  
 b. (...) the matter and *its consideration* by experts (OED)  
 c. Rigid formality tends to be perceived these days (and politeness now as ever has everything to do with *its perception* by others) as an impolite and unkind expression of icy distance. (*The Guardian*)  
 d. It was we Croats who (...) invented the trans-national Yugoslav ideal and spent the better part of two centuries in *its pursuit*. (*The Guardian*)  
 e. (...) the file was taken from the PRO in 1987 – *its loss* was discovered in mid-1989. (*The Guardian*)

- f. (...) the "supergun" inquiry has only been delayed because of the large number of witnesses. (...) Only one session of the Committee will be missed and the whole day after our return will be given to *its discussion*. (*The Guardian*)
- g. Radiation sickness, *its prevention, its treatment*, is a problem for the medical services. (*OED*)

Taylor (1996) proposes that the violations of the Affectedness Constraint result from the discourse-topicality of the possessors. He points out that the phrases *its observation, their recollection* may sound odd (and be judged ill-formed) in isolation. Their acceptability increases in an appropriate context, as is attested by the English glosses for the following Italian examples from Giorgi and Longobardi (1991: 141–142):

- (52) a. A proposito di quegli avvenimenti, il loco ricordo ancora mi spaventa.  
'Concerning those events, *their recollection* still frightens me'.
- b. A proposito di quel problema, la sua percezione varia da individuo a individuo.  
'Concerning that problem, *its perception* varies from person to person'.
- c. A proposito di quella fotografia, una sua attenta osservazione rivelerà molti particolari interessanti.  
'Concerning that picture, its careful observation will reveal many interesting details'.
- d. A proposito di quel romanzo, la sua comprensione richiede notevoli capacità ermeneutiche.  
'Concerning that novel, its understanding requires remarkable hermeneutic skills'.
- e. A proposito di quel film, il suo pieno godimento è certo riservato a pochi amatori.  
'Concerning that film, its full enjoyment is certainly restricted to a few amateurs'.

Let us observe that the majority of the examples of English passive nominals given in Kayne (1984: 137–138), and quoted below in (53), contain possessive pronouns. The third person pronouns *its* and *their* are particularly common as prenominal objective possessives.

- (53) a. We were all awaiting its perusal by Mary.
- b. Its formalization by Gauss led immediately to further breakthroughs.
- c. Their confiscation by the authorities caused a scandal.
- d. Its omission by Bill is surely significant.
- e. We were all in favour of its popularization by the media.
- f. Its annulment by the authorities came as a surprise.
- g. Her vilification by the council was unwarranted.

The difference between lexical and non-lexical (i.e. pronominal) DPs in the pronominal position is noted in Grimshaw (1990: 87 ff.). She regards the phrases in (54) as seriously degraded (as well as some of the examples with lexical DPs as possessors, provided by Kayne 1984). Still, she notices (in agreement with Kayne 1984) that the replacement of a lexical DP in the pre-head position by a pronominal element improves the acceptability of such nominals:

- (54) a. ??the tree's removal by Mary  
       b. ??during the course of the food's digestion by worms
- (55) a. its removal by Mary  
       b. during the course of its digestion by worms

Many examples of passive nominals with pronominal possessors can be obtained by searching the Internet sources<sup>13</sup>.

- (56) a. Nitrates in Drinking Water and Their Removal  
       b. Teeth Stains and Their Removal  
       c. Shark Attacks – Their Causes and Avoidance  
       d. The Roach Report – Geological Hazards: Their Assessment, Avoidance and Mitigation, by Fred G. Bell  
       e. awareness of material defects, their significance, detection and their avoidance along with repair techniques  
       f. analyze harmful developments in this area and indicate possibilities for their avoidance or elimination  
       g. network trouble and its avoidance  
       h. Patronage and its avoidance in classical Athens  
       i. breathing, breathlessness and its avoidance  
       j. To report graffiti and request its removal, call the special 24-hour hotline.  
       k. Harriet F. Senie explores the history of Tilted Arc, including its 1979 commission and the heated public hearings that eventually led to its removal in 1989.  
       l. Since caffeine in itself is virtually tasteless, coffee flavor should not be affected by its removal.  
       m. Indeed, almost more time is devoted to the preparation and cooking of the catch than to its pursuit.  
       n. viewing happiness and the various means to its attainment  
       o. the necessary skills for rigorous documentation and prediction of environmental problems and for making sound recommendations for their avoidance or mitigation  
       p. evolutionary pursuit and its application to face recognition

<sup>13</sup> The above examples come from a "Google" search carried out on 28<sup>th</sup> January 2003. The original spelling of the examples is preserved, e.g. *flavor* in (56l).

Some of the pronominal possessives in (53) and (56) violate the Affectedness Constraint (e.g. *its perusal by Mary*). Some other phrases may be argued to abide by the Affectedness Constraint if we adopt Zubizarreta's and Anderson's position that affected objects include objects undergoing a change of state or location, concealment or exposure (e.g. *their removal, their confiscation, its annulment, its popularization*). Diagnostic tests with the adverbial *almost* or with manner adverbials (cf. Rapaport-Hovav and Levin 1998, Biały 2004) suggest that the predicates *remove*, *confiscate* or *popularize* denote two temporally independent subevents (so they should be recognized as predicates with affected objects). The sentence *I almost removed the dirt from the kitchen walls* allows two interpretations, i.e. 'I almost did something to remove the dirt', or 'I did something and the dirt was almost removed'. (For a similar ambiguity, see the sentence *They almost confiscated the pets*.) The manner adverbial *slowly* can refer to either of the two temporally independent subevents, e.g. *I removed the dirt slowly, They popularized his book slowly*. The verbs in question can occur in middle sentences, e.g. *Back seats remove easily* and *Some pets are too large to confiscate easily, These things popularize quickly*.

However, the replacement of a pronominal possessive by a Saxon genitive form of a lexical noun may result in ill-formed, or marginally acceptable, nominals related to the above-mentioned verbs, such as those in (57) below, or in ??*the tree's removal* in (54a).

- (57) a. ?the new law's annulment by the authorities  
 b. ?\*the book's popularization

Some other factors, apart from the "affectedness" of the objects, influence the acceptability judgments concerning passive nominals such as those in (57) above<sup>14</sup>. They will be discussed at greater length in the next chapter (where, among others, we will discuss the influence of the Animacy Hierarchy).

<sup>14</sup> Observe also that the affectedness of objects is not the only condition on the acceptability of middles. What matters is also the extralinguistic context, cf. ??*These stains remove easily, ??Front teeth remove with difficulty, ??His books popularize with difficulty*.

#### 4.8. The presence of the implicit external argument in passive nominals and cross-linguistic variation

In the literature which is couched within the Principles and Parameters model or the Minimalist program it is usually argued that the implicit external argument should be represented by PRO. Extensive discussion of the occurrence of PRO in deverbal nominals can be found in, among others, Roeper (1987, 1993), Williams (1985), Safir (1987), Szabolcsi (1992), Mallén (1990), and Longobardi (2000).

Roeper (1987, 1993) considers the following contrasts between the behaviour of English “active” event nominals (in which the Agent-type argument is not overtly expressed) and the behaviour of corresponding passive nominals.

- (58) a. the sinking of the ship to collect insurance
- b. \*the ship’s sinking to collect the insurance
- c. the review of the book to prove a point
- d. \*the book’s review to prove a point

He postulates that the difference between the above-mentioned “active” and “passive nominals” is due to the presence of the implicit subject (i.e. PRO) in the active nominals. The null PRO argument satisfies the external argument and carries a thematic role. It is also able to control into the rationale clause, i.e. *the PRO destruction of the city* [*PRO to prove the point*]. In active nominals with an overt subject (occurring as a Saxon genitive), the Agent-type argument is similarly able to control the PRO subject of the rationale clause, i.e. *John’s destruction of the city* PRO *to prove the point*. Roeper (1987) assumes that the same type of the null argument occurs in gerundive nominals and infinitival clauses, e.g. *I<sub>i</sub> left without PRO<sub>i</sub> giving an explanation*, and *PRO to sell the house now (would be a mistake)*. Roeper (1993) argues that in the case of English passive nominals, the subject PRO is displaced by the preposed object (i.e. *the ship’s*, *the book’s*), hence no purpose clauses are licensed (as shown in 58b, 58d above).

Roeper’s hypothesis of the obliteration of the subject PRO in English passive nominals is adopted and extended in, among others, Abney (1987) and Longobardi (2000)<sup>15</sup>. The ill-formedness of the phrase *\*this*

<sup>15</sup> A slightly different position is taken in Safir (1987) and Szabolcsi (1992). Safir (1987) postulates the occurrence of the implicit and syntactically non-inert external argument in English nominals, such as *the sinking of the boat*. However, he argues that this



*drug's testing on oneself* is adduced in Longobardi (2000) as another piece of evidence for the lack of subject PRO in English passive nominals.

Longobardi (2000) postulates that Romance languages and German are parametrically opposed to English and Scandinavian languages. In Scandinavian languages and in English there is only one external (i.e. Subject) argument position in nominals. Therefore, the subject PRO is erased when the possessivized object moves there. In contrast, in Romance languages and in German there are two external argument positions in nominals, i.e. the position of P(ossessor) and the position of S(ubject). One of them may host the raised (i.e. possessivized) object, while the latter may be occupied by the PRO subject. In other words, there is no erasure of the subject PRO in Italian, German or French nominals in which the object-type argument occupies the prenominal possessive position<sup>16</sup>. As is shown in (59), in the case of Romance passive nominals, the binding and control by an unexpressed (i.e. PRO) subject is possible:

- (59) a. En cuanto a ese barco, estoy en desacuerdo con su  
           about that ship I-am in disagreement with its  
           destrucción con vistas a cobrar el seguro  
           destruction with intention to collect the insurance (Spanish, Mallén 1990)
- b. la sua sperimentazione su se stessi  
           'ts (e.g. the drug's) testing on oneself' (Italian, Longobardi 2000, ex. 17b)

Longobardi (2000) does not comment on the parameter setting for Slavic nominals. The data considered in section 4.6. of the present study could be interpreted as indicating that Polish patterns with Romance languages in allowing for two external argument positions, i.e. P(ossessor) and S(ubject). In Polish "quasi-passive nominals", the implicit Agent-type argument is syntactically non-inert since it can control into

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implicit argument should not be represented as PRO, since it cannot be the antecedent of traces. It is syntactically projected but not linked (i.e. not mapped onto an argument position) in English event nominals. Szabolcsi (1992) proposes that Hungarian complex event nominals contain a PRO subject with controlled or arbitrary (i.e. quasi-existential or quasi universal) interpretation. She suggests that PRO argument is present not in the syntax but in the lexical structure, where it receives a thematic role. Notice that Grimshaw (1990) argues against the recognition of PRO in (active or passive) nominals. She asserts that the position of the external argument is suppressed and requires no syntactic satisfaction (not even by null elements).

<sup>16</sup> Mallén (1990) does not recognize two external positions in Romance nominals. He proposes that in Romance nominals the preposed object does not move to the specifier position (which would result in "erasing" the subject PRO), but cliticizes to the head D through the intermediate functional projection (labelled "NI").

the purpose clauses and bind the anaphoric pronoun *sobie* or the reflexive pronoun *swój* 'self's'. It can also license agentive phrases and agent-oriented modifiers such as *umyślny* 'deliberate'. For convenience, some relevant data are repeated here from section 4.6:

- (60) a. liczne przypadki *ich* fałszowania przez hurtowników napojów alkoholowych  
           'numerous cases of falsifying them (lit. of their falsifying) by wholesalers  
           dealing in alcoholic beverages' (= 44b)
- b. *ich* umyślne prowokowanie  
       their deliberate provoking  
       'the deliberate provoking of them' (= 44d)
- c. regularne jego zażywanie po to, by zwiększyć odporność organizmu  
       regular its taking for this to increase immunity organism.Gen  
       'taking it regularly in order to increase the immunity of the body (to dis-  
       eases)' (= 45a)
- d. wcześniejsze *ich*<sub>i</sub> wypróbowanie na *sobie*<sub>k</sub> dla uniknięcia niespodzianki  
       earlier their testing on oneself for avoiding surprise.Gen  
       'testing them on oneself earlier in order to avoid (the) surprise' (= 45b)

Both in Romance languages and in Polish there are passive nominals which resemble English passive nominals. Romance passive nominals with affected objects are analyzed in Longobardi (2000) and Mallén (1990) as involving the replacement of the subject PRO by the raised object, which allows for binding and control:

- (61) a. The president's moral destruction was certainly not helpful for his career.  
       (cf. Longobardi 2000, ex. 29)
- b. Su<sub>2</sub> ejecución después de PRO<sub>2</sub> recibir tales  
       his execution after to receive such  
       tratos es despiadada (Spanish, Mallén 1990, ex. 39b)  
       treatment is pitiless

Corresponding examples are difficult to construct for Polish "genuine passive nominals". They sound somewhat degraded, partly due to the fact that the non-pronominal prenominal adjectives are not as common as pronominal possessives, and the reflexive pronoun *swój* 'self's' is frequently infelicitous or redundant<sup>17</sup>.

<sup>17</sup> When assessing the acceptability of sentences with anaphoric pronouns in Polish, one needs to keep in mind the ambiguity of the form *swój*. As is shown in Bobrowski (1993: 123 ff.) it is useful to distinguish three homonymous lexemes, i.e. the adjective

- (62) a. \*Jankow<sub>i</sub> aresztowanie nie pomogło mu<sub>i</sub> w swojej<sub>i</sub> karierze.  
 Janek.PA arrest not helped him in self's career  
 'The fact that John was arrested did not help him in his own career'.  
 b. ??twoje<sub>i</sub> porwanie ze swojego<sub>i</sub> domu  
 your kidnapping from self's house  
 'your being kidnapped from your own house'  
 c. ??Pańskie<sub>i</sub> odwołanie ze swojego<sub>i</sub> stanowiska  
 Your.Sg dismissal from self's post  
 'Your.Sg (polite form) being dismissed from your post'

It is easier to show that the objective possessives in Polish nominals from Experiencer verbs can bind reflexive pronouns<sup>18</sup>:

- (63) a. Pańskie<sub>i</sub> zdumienie zachowaniem swoich<sub>i</sub> dzieci  
 Your.Sg astonishment behaviour.Instr self's children.Gen  
 'Your.Sg (polite form) astonishment at the behaviour of Your children'  
 b. twoje<sub>i</sub> zmęczenie zmianami humoru swojego<sub>i</sub> męża  
 your.Sg tiredness changes.Instr mood.Gen self's husband  
 'your being tired with the changes in your husband's mood'  
 c. twoje<sub>i</sub> poniżenie przed swoją<sub>i</sub> własną rodziną  
 your.Sg humiliation before self's own family  
 'your.Sg being humiliated in front of your family'

If we adopted the terminology and assumptions of Longobardi (2000), we would say that "quasi-passive nominals" in Polish (e.g. *ich prowokowanie* 'lit. them (being) provoked') have two external argument positions (one of which is occupied by PRO). Polish "genuine passive nominals" would be regarded as having only one argument position (into which the object argument is raised, as in *wasze wydalenie ze szkoły* 'your expulsion from school', *twoje poniżenie* 'your humiliation'). Since the present monograph does not adopt the theory of the Minimalist Pro-

*swój<sub>i</sub>*, which could be paraphrased as 'close, not foreign', the adjective *swój<sub>2</sub>* which occurs in the sense 'own', and the reflexive possessive pronoun *swój* 'self's'.

<sup>18</sup> However, care should be taken when the evidence from anaphoric binding is employed as evidence for the configurational analysis of nominals. Rappaport (1986) points out for Russian that the internal argument in "active" nominals can occasionally serve as an antecedent for a reflexive pronoun, as is shown in (i) for Polish:

- (i) poniżanie chłopców<sub>i</sub> przed ?swoimi/ich<sub>i</sub> dziewczynami  
 humiliating boys.Gen before self's/their girls.Instr  
 'humiliating (the) boys in front of self's girl-friends'

Data of this type may indicate the influence of the thematic role borne by a given NP, rather than its hierarchical position, on anaphoric binding (cf. Jackendoff 1972 and Bresnan 2001).

gram or the Principles and Parameters model, we prefer to see the distinction between “genuine passive” and “quasi-passive nominals” in Polish as the difference in the absence vs. presence of the implicit external argument.

Moreover, Longobardi’s assumption of a parametric difference between languages where nominals can have two external argument positions and languages which allow only one external argument encounters problems, in view of the data discussed above in section 4.7. “Quasi-passive nominals” in English, such as *their avoidance* or *its perception*, would necessitate the recognition of two external argument positions. The occurrence of *by*-phrases in some of the examples quoted in section 4.7. after Kayne (1984) indicates that the subject-type argument is syntactically active in those nominals.

- (64) a. We were all awaiting its perusal by Mary.  
 b. Its formalization by Gauss led immediately to further breakthroughs.

We believe that there is no parametric difference between the structure of passive nominals in Polish (or Romance languages) and English. Instead, there exists a difference in the frequency of the occurrence of “genuine passive” and “quasi-passive nominals” in the languages under discussion.

“Genuine passive nominals” (denoting one-participant eventualities, with no implicit Agent-type argument) are frequent in English, but relatively infrequent in Polish. “Quasi-passive nominals”, in which the Agent-type argument is syntactically active, are very common in Polish, especially in the careful variety of the language. They typically contain third person pronominal possessives. Corresponding examples of “quasi-passive nominals” in English sound odd when uttered in isolation but are attested in written texts (especially of the more formal variety).

English “quasi-passive nominals” typically occur with pronominal third person possessives, i.e. *its* and *their*. However, it can be argued that some speakers of English allow for “quasi-passive nominals” with lexical noun phrases in the pre-head position, such as *Tibet’s colonization by China* or *the poems’ translation by John* (where the implicit Agent argument licenses the agentive adjunct). When we look at the literature on deverbal nominals in English, we may observe variation in the acceptability judgments concerning passive nominals with purpose clauses. Roeper (1987, 1993) and Abney (1987) reject such noun phrases, which is consonant with their assumption of the lack of PRO subject.

- (65) a. \*the city's destruction to prove a point (= Roeper 1994, ex. 40b)  
 b. \*the boat's destruction to collect insurance (= Abney 1987: '96)

In contrast, Safir (1987) and Roberts (1987) regard similar examples as acceptable.

- (66) a. Mary's seduction in order to prove a point (= Roberts 1987, ex. 193a)  
 b. the city's destruction to prove a point (= Safir 1987, ex. 35c, = Roberts 1987, ex. 153b)

The examples in (66) may be interpreted as indicating that some speakers of English, as shown in Roberts (1987) and Safir (1987), allow lexical noun phrases to occur in English "quasi-passive nominals"<sup>19</sup>.

## 4.9. Summary

In this chapter it was shown that English passive nominals have event structure and argument structure. They do not necessarily exhibit a non-event (i.e. stative) reading, as was claimed in Grimshaw (1990). Passive nominals in English, and in Polish, can occur in the event reading (i.e. 'the process/act of V-ing') or in the propositional reading (when they are paraphrasable as '(the fact) that...'). It was further demonstrated that prenominal possessives with object-type reading pass standard tests for argumenthood. A difference between the event structure of "genuine passive nominals" and "quasi-passive nominals" was postulated. "Genuine passive nominals" involve affected objects, e.g. *John's transfer* and *the city's destruction* in English, or *twoje aresztowanie* 'your.Sg arrest' and *wasze wydalenie* 'your.Pl expulsion' in Polish. They lack the activity subeventuality on their event structure (cf. Doron and Rappaport-Hovav 1991), hence they have no Agent-type argument. Therefore, they are interpreted as denoting one-participant eventualities. In contrast, the external (Agent-like) argument is syntactically active in "quasi-passive nominals" in Polish, such as *ich unikanie* 'their avoidance'.

It was suggested that English passive nominals with pronominal unaffected possessors, e.g. *their recollection*, or *its understanding*, can be ana-

<sup>19</sup> Although the nominals in (66) contain affected objects, they are treated here as "quasi-passive nominals" due to the presence of the syntactically non-inert external argument.

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lyzed as “quasi-passive nominals” (which have an implicit Agent-type argument). It was argued that the occurrence of “quasi-passive nominals” in English constitutes counterevidence against the hypothesis outlined in Longobardi (2000), concerning the parametric cross-linguistic variation in the number of external positions available in noun phrases.

## **Harmonic alignment of prominence scales and argument linking in nominals**

### **5.1. Introduction**

The outline of this chapter is as follows. In section 5.2. brief remarks will be offered on the principles of lexical mapping in Lexical-Functional Grammar, and the grammatical functions recognized within the nominal domain. In section 5.3. the notion of the Nominal Scale will be introduced and the alignment of the Nominal Scale with other prominence scales will be illustrated for referential nouns (following the analysis in A i s s e n 2002). In the same section it will be shown how the same OT mechanism can be applied to predict the morphological realization of Possessors in Polish referential nouns. Section 5.4. will deal with selected issues concerning argument linking in event nominals in Polish and English. Special attention will be paid to passive nominals. Section 5.5. will indicate possible extensions of the analysis. Section 5.6. will bring the summary of the chapter.

### **5.2. Grammatical functions in noun phrases**

Since the framework of Optimality Theory advocated in A i s s e n (1999, 2000) and B r e s n a n and A i s s e n (2002) adopts some insights from Lexical-Functional Grammar, it is useful to give now a very brief summary of the theory of lexical mapping in LFG (see, for instance, B r e -

snan 2001, Sadler and Spencer 1998, or Laczko 1995, 2000 for more details).

Grammatical functions are regarded as primitives in early LFG. They can be either subcategorizable (i.e. assigned to arguments) or nonsubcategorizable (assigned to adjuncts). Two subcategorizable grammatical functions are semantically unrestricted, namely SUBJ(ect) and OBJ(ect). Consequently, they can be associated with various semantic roles. Other subcategorizable grammatical functions are semantically restricted, e.g.  $OBL_{instr}$ ,  $OBL_{goal}$ ,  $OBL_{ag}$  (where OBL is an abbreviation of 'oblique').

In the revised version of LFG, which is enriched with the theory of lexical mapping, grammatical functions are reinterpreted as sets of features, namely  $[+/-r]$  and  $[+/-o]$  (where 'r' stands for 'semantically restricted' and 'o' for 'objective'):

- (1) subjects  $[-r]$ ,  $[-o]$   
       objects  $[-r]$ ,  $[+o]$   
       semantically restricted objects  $[+r]$ ,  $[+o]$   
       obliques  $[+r]$ ,  $[-o]$

Mapping of semantic lexical representation of verbal predicates onto syntactic arguments proceeds in several steps. First, thematic roles are associated with syntactic value features. Patients are associated with  $[-r]$ , and Agents with  $[-o]$ . Further values are provided by Default Rules. For instance, the highest thematic role is associated with the feature  $[-r]$ . Unless there apply valency-changing operations (e.g. passivization), the features  $[-r]$ ,  $[-o]$  (which represent the grammatical function of SUBJ) are associated with Agents, while Patients are identified with the features  $[-r]$ ,  $[-o]$  (i.e. the grammatical function of OBJ) in clausal structures.

Research on noun phrases, couched within the framework of Lexical-Functional Grammar, suggests the need for different grammatical functions at the sentence-level and at the NP-level.

Rappaport (1983), when analyzing noun phrases in English, employs the grammatical functions of POSS(essor) and  $OBL_{th}$  (i.e. Oblique Theme). She suggests that both these functions are semantically restricted. This is in contrast to SUBJ and OBJ functions established for the sentential level. Rappaport (1983) postulates, furthermore, that POSS is always realized by the 's genitive in English, while  $OBL_{th}$  is realized by *of*-phrases (and typically associated with the role of Patient).

- (2) a. the love of money ( $OBL_{th}$ )  
       b. John's (POSS) escape  
       c. John's (POSS) car  
       d. the leg of a table ( $OBL_{th}$ )



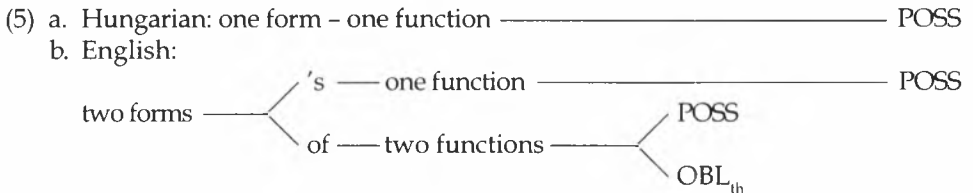
Laczkó (1997) adopts POSS and OBL<sub>th</sub> functions for the nominal domain, but he suggests serious revisions of Rappaport's account. He argues that, whereas OBL<sub>th</sub> is semantically restricted, the POSS function is semantically unrestricted and corresponds to the SUBJ function at the clausal level. Moreover, he puts forward the claim that the POSS function in English noun phrases can be realized either by the 's genitive or *of*-genitive. To support this claim, he adduces the data in (3), which show that frequently the *of*-phrase and 's genitive are both available as alternative ways of expressing possessors (see also the discussion of English possessives and genitives in section 1.2.):

- (3) a. the ship's (POSS) funnel  
 b. the funnel of a ship (POSS)  
 c. the guests' (POSS) arrival  
 d. the arrival of the guests (POSS)

The OBL<sub>th</sub> function is obligatorily expressed by the *of*-phrase:

- (4) the enemy's (POSS) destruction of the city (OBL<sub>th</sub>)

This is summarized by the following diagram, quoted with slight modifications from Laczkó (1997: 472), which contrasts the relationship between form and function in Hungarian and English:



Laczkó (1997: 470) postulates the so-called Possessor condition, which states that "Every event nominal predicator must have a possessor". He observes that the obligatoriness of the POSS function in the nominal domain corresponds to the Subject Condition in the clausal domain.

Notice that, in the case of event nominals in which the Agent is realized as the agentive adjunct *by*-phrase, Laczkó (1997: 470) assigns the POSS function either to the prenominal constituent *the city's* or to the *of*-phrase *of the city*.

- (6) a. the city's (POSS) destruction by the enemy  
 b. the destruction of the city (POSS) by the enemy

The analysis in (6) results from *Laczkó's* assumption that event nominals follow the ergative pattern in argument realization (as was mentioned in Chapter 3). He assumes (as in *Grimshaw* 1990) that the process of mapping arguments onto grammatical functions in nominals involves the suppression<sup>1</sup> of the highest [-o] argument, e.g. the argument with the role of Agent (if it is available). The suppressed Agent argument licenses the agentive adjunct. Meanwhile, the highest [-r] and [+o] argument is mapped onto the POSS(essor) function.

Within the approach taken in *Laczkó* (1995, 1997), it is not easy to account for the argument linking in English transitive nominals, such as *the enemy's* (POSS) *destruction of the city* (OBL<sub>th</sub>) in (4). *Laczkó* (2000: 220) suggests employing an operation which changes the intrinsic specification of the Theme argument from [-r] to [+r]. As a result, the Theme argument will not be mapped onto the POSS function, but onto the semantically restricted OBL<sub>th</sub> function. The POSS function will then be free to accommodate the Agent argument.

If we were to adopt the same approach for the analysis of Polish nominals, the following constituents, italicized below, would have to be analyzed as realizing the POSS function:

- (7) a. *ich* (POSS) *przyjazd* 'their arrival'  
 b. *ich* (POSS) *odwołanie przez ministra* 'their dismissal (i.e. the dismissal of them) by the minister'  
 c. *odwołanie ich* (POSS) *przez ministra* 'the dismissal of them by the minister'  
 d. *odwołanie rektora* (POSS) *przez ministra* 'the dismissal of the Vice-Chancellor by the minister'

Nominals in which the prenominal possessive co-occurs with the adnominal genitive would call for one of the two analyses. For instance, as shown in (8a), the adnominal genitive could be treated as POSS, and the prenominal possessive could be regarded as an adjectival attribute. Let us recall that some arguments against the treatment of prenominal possessives as modifiers (as in 8a) were considered earlier in section 3.4. Thus, in an alternative analysis which follows *Laczkó* (2000), the prenominal possessive in Polish could be identified as POSS, and the adnominal genitive as OBL<sub>th</sub>, as in (8b):

- (8) a. *twoje* (modifier) *śpiewanie arii operowych* (POSS) *w łazience*  
       'your singing of the opera arias in the bathroom'  
 b. *twoje* (POSS) *śpiewanie arii operowych* (OBL<sub>th</sub>) *w łazience*

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<sup>1</sup> The suppression does not affect the single argument of nominals related to intransitive verbs.

Laczkó's theory of argument linking in event nominals is attractive, yet it raises some problems.

Firstly, in view of the evidence supporting the parallelism between noun phrases and verb phrases, surveyed in section 3.3., it would be more appropriate to employ the functions of SUBJ and OBJ in the nominal domain<sup>2</sup>. This would be particularly welcome when dealing with event nominals, which inherit their argument structure from related verbs. Laczkó (2000: 212) tentatively considers the possibility of regarding Possessors in noun phrases as having the SUBJ function. He concludes, however, that "this would stretch the category of the SUBJ function to an undesirable extent".

If the POSS function in nominals is treated as an equivalent of SUBJ in clausal structures, objections could be raised against the association of POSS with the postnominal *of*-phrase in (6b), namely *the destruction of the city* (POSS) *by the enemy*. Such an analysis runs counter to the evidence, reviewed in Chapter 4, which suggests the presence of a syntactically active, though not expressed overtly, Agent-type argument in the position of the subject of DP. This argument is represented by many advocates of the Principles and Parameters model, or the Minimalist program, as PRO, e.g. *the PRO<sub>i</sub> sinking of the ship* *PRO<sub>i</sub> to collect the insurance*, *PRO<sub>i</sub> picture of Eve* (cf. Roeper 1993, Veselovská 1998, Longobardi 2000). Some other researchers (e.g. Safir 1987) propose that the implicit Agent is syntactically non-inert but it is not mapped onto an a(rgument)-position, hence it would not be available for the POSS function.

We will not make a commitment as to whether the unexpressed Agent should be structurally represented as PRO, apart from being included in the lexical-conceptual structure and the event structure of a given nominal. We will assume here that the implicit Agent argument needs to be represented in the a-structure of derived nominals (see Laczkó 2000). We will show that constraints which predict the most optimal linking of arguments in event nominals are sensitive to the number of event participants, i.e. to the presence of the implicit Agent.

Let us notice, moreover, that the proponents of LFG investigate mainly principles which predict mapping of a(rgument) structure onto grammatical functions, i.e. onto f(unctional) structure. They are not interested

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<sup>2</sup> The claim that grammatical functions SUBJ and OBJ should be postulated for deverbal nominals is also made in, among others, Hawkins (1981). Bresnan (2001) proposes that arguments of gerundive verbs bear the SUBJ and OBJ functions. Since gerunds can occur with possessors, the SUBJ function is identified here with the POSS function by a lexical rule. She suggests that English gerundive nominals contain a null pronominal subject PRO when the possessive is omitted, e.g. *PRO visiting Fred*.

in rules that determine the structural expression of grammatical functions. This stems, partly, from the fact that their research is focused on a-structure to f-structure mapping in clauses. The grammatical functions of SUBJ and OBJ have canonical c(onstituent)-structure positions (as in English) and/or are canonically associated with morphological cases, e.g. Nominative and Accusative. Therefore, in the next section we will look at studies which investigate competition between alternative structural expressions of particular grammatical functions.

### 5.3. A i s s e n ' s (2002) account for the realization of Possessors in referential nouns

#### 5.3.1. The Nominal Scale

A i s s e n (2000) attempts to predict the realization of Possessors in referential nouns. Let us notice that both L a c z k ó (2000) and B r e s n a n (2001) assume that possessor nominals, such as *John* in *John's hat*, or *Mary* in *the brother of Mary*, carry the POSS function. L a c z k ó (2000) argues for a unified analysis of possessors, both in noun phrases headed by event and non-derived (concrete) nouns. B r e s n a n (2001: 293) proposes that the referential nouns can "have their argument structures augmented to take the possessor (POSS) function as an argument".

Observe that, in order to model the competition between surface realizations of the POSS function, one could employ constraints which align semantic roles with language-specific morphological cases or structural positions. In the case of English, we might propose a prominence scale for positions in an NP, in which the synthetic genitive dominates the analytic one, as in (9a). With respect to Polish, we might employ the hierarchy of argument positions in noun phrases in (9b), proposed in V e s e l o v s k á (1998: 282) for event and non-event nominals in Czech:

- (9) a. Synthetic genitive ('s genitive) > Analytic genitive (*of*-genitive)  
 b. POSS(essive) > GEN(itive) > AP (adjective phrase) modifier

It would be more attractive, however, to use one prominence scale which could be appropriate for cross-linguistic comparisons. Notice that A i s s e n (2002) identifies two structural positions for possessors: the

prenominal position and the postnominal position<sup>3</sup>. She refers to the pre-head position in the nominal phrase as the Specifier position (Spec of N), and to the post-head position as the Non-Spec.

Along the lines of Aissen (2002), we will recognize the following hierarchy of structural positions within noun phrases:

- (10) Nominal Scale: Spec<sub>N</sub> > Non-Spec<sub>N</sub>

As can be recalled from Chapters 3 and 4, the cross-linguistic research reported on in Giorgi and Longobardi (1991), or the research on Polish carried out in Willim (1995a, b), and Rozwadowska (1995b), suggests the existence of more than two structural positions identifiable within noun phrases. Giorgi and Longobardi (1991) distinguish three hierarchical levels of attachment of postnominal satellites in noun phrases, i.e. Possessive (modifier) > External argument > Internal argument. In Longobardi (2000) the hierarchy in (11a) is postulated as a hierarchy of A-positions. Each of those postnominal satellites can move to the prenominal Spec<sub>N</sub> position. Consequently, the Nominal Scale could be extended, as proposed in (11b), where Gen stands for a post-head genitive:

- (11) a. Possessor > Subject > Object (Longobardi 2000)  
 b. The Extended Nominal Scale (proposal):  
 Spec<sub>N</sub> > Possessor Gen > Subject Gen > Object Gen

However, the version of the Nominal Scale employed in Aissen (2002) has an important advantage. It is binary hence it can be harmonically aligned with non-binary prominence scales. The scale in (10) will be sufficient for the discussion of selected referential nouns and event nominals in this chapter<sup>4</sup>.

Aissen (2002) shows that the Nominal Scale can be aligned with the Animacy Scale and with the Definiteness Scale.

- (12) a. Nominal Scale: Spec<sub>N</sub> > Non-Spec<sub>N</sub>  
 b. Animacy Scale: Human > Animate > Inanimate  
 c. Definiteness Scale: Pronoun > PN (Proper Noun) > Definite > Indefinite  
 Specific > Non-Specific

<sup>3</sup> Let us recall that in Giorgi and Longobardi's cross-linguistic study of nominals the specifier of NP occurs always on the left of the head.

<sup>4</sup> If we intended to analyze Polish result nominals with two genitives, such as *kolekcja znaczków Piotra* 'collection stamps.Gen Peter.Gen', we would need to split the scale in (11b) into binary subsections, i.e. Spec<sub>N</sub> > Possessor Gen, Possessor Gen > Subject Gen, and Subject Gen > Object Gen.

The alignment of those scales produces the following Harmony Scales (i.e. pairs of harmonic associations of values from two scales). It is harmonic to associate elements which stand at the top of two scales, i.e. the Animacy Scale and the Nominal Scale (as shown in  $H_1$ ), or the Nominal Scale and the Definiteness Scale (see  $H_3$ ). It is also desirable to pair elements occupying low positions on two (or more) scales, e.g. the Nominal Scale and the Animacy Scale (see  $H_2$ ), or the Nominal Scale and the Definiteness Scale (as in  $H_4$ ).

(13) Harmony scales:

$H_1$ : Spec<sub>N</sub>/Human > Spec<sub>N</sub>/Animate > Spec<sub>N</sub>/Inanimate

$H_2$ : Non-Spec<sub>N</sub>/Inanimate > Non-Spec<sub>N</sub>/Animate > Non-Spec<sub>N</sub>/Human

$H_3$ : Spec<sub>N</sub>/Pronoun > Spec<sub>N</sub>/PN > Spec<sub>N</sub>/Definite > Spec<sub>N</sub>/IndefSpecific > Spec<sub>N</sub>/IndefNon-Specific

$H_4$ : Non-Spec<sub>N</sub>/IndefNon-Specific > Non-Spec<sub>N</sub>/IndefSpecific > Non-Spec<sub>N</sub>/Definite > Non-Spec<sub>N</sub>/PN > Non-Spec<sub>N</sub>/Pronoun

The harmony scales in (13) can be translated into subhierarchies of constraints in (14). The constraint which prohibits the least harmonic association of elements from two scales (e.g. \*Spec<sub>N</sub>/Inanimate) will be ranked higher than the constraints which penalize more harmonic pairings of elements from prominence scales (e.g. \*Spec<sub>N</sub>/Animate).

(14) Constraint subhierarchies:

$C_1$ : \*Spec<sub>N</sub>/Inanimate >> \*Spec<sub>N</sub>/Animate >> \*Spec<sub>N</sub>/Human

$C_2$ : \*Non-Spec<sub>N</sub>/Human >> \*Non-Spec<sub>N</sub>/Animate >> \*Non-Spec<sub>N</sub>/Inanimate

$C_3$ : \*Spec<sub>N</sub>/IndefNon-Specific >> \*Spec<sub>N</sub>/IndefSpecific >> \*Spec<sub>N</sub>/Definite >> \*Spec<sub>N</sub>/PN >> \*Spec<sub>N</sub>/Pronoun

$C_4$ : \*Non-Spec<sub>N</sub>/Pronoun >> \*Non-Spec<sub>N</sub>/PN >> \*Non-Spec<sub>N</sub>/Definite >> \*Non-Spec<sub>N</sub>/IndefSpecific >> \*Non-Spec<sub>N</sub>/IndefNon-Specific

### 5.3.2. Harmonic alignment of scales and English referential nouns

By employing the constraints in (14), Aissen (2002) is able to make correct generalizations concerning the realization of Possessors in referential nouns in English. In the case of non-pronominal possessors, those with animate (especially human) reference are more likely to occur

as prenominal modifiers than those with inanimate reference, as is predicted by the constraint subhierarchy in  $C_1$  and illustrated by the following pair of noun phrases, contrasted in Jucker (1993).

- (15) a. the man's left eye                      b. the eye of the needle

The ranking within each of the constraint subhierarchies (e.g.  $C_1$ ) is universal and inviolable, but the ranking between individual constraints from different subhierarchies must be established for each language independently.

The lower felicity of the rival linearization patterns of the noun phrase in (15b), i.e. *\*the needle's eye*, could be predicted by ranking  $*Spec_N/Inanimate$  above  $*Non-Spec_N/Definite$  in English.

(16)

|                            | $*Spec_N/Inanimate$ | $*Non-Spec_N/Definite$ |
|----------------------------|---------------------|------------------------|
| ☺ a. the eye of the needle |                     | *                      |
| b. the needle's left eye   | *!                  |                        |

Another piece of evidence supporting this ranking is the difference between *the cat's paw* and *\*the chair's leg*. In the latter case, the definite inanimate possessor must surface in the *of*-phrase, i.e. *the leg of the chair*.

The fact that two linearization patterns are available if the possessor is human and/or animate may suggest that the constraints which prohibit each of the rival candidates, i.e.  $*Spec_N/Human$  and  $*Non-Spec_N/Human$  (or  $*Spec_N/Animate$  and  $*Non-Spec_N/Animate$ ) are of equal rank<sup>5</sup>. In other words, they are tied constraints. This will be indicated by a dashed line in the tableau below. Since  $*Non-Spec_N/Human$  is the highest ranked constraint in the subhierarchy given in  $C_2$ , while  $*Spec_N/Human$  is ranked lowest in the subhierarchy in  $C_1$ , this means that constraints on the Non-Specifier position (i.e. the *of*-genitive) which make reference to the Animacy Scale are relatively unimportant.

<sup>5</sup> Within the stochastic version of Optimality Theory, as presented in Boersma and Hayes (2001) or Dingare (2001), the occurrence of variable outputs may be captured by variation in effective constraint ranking. One could assume in such a model that there is a small difference between the strength of the two constraints in (17) on the hierarchy, hence their relative position on the constraint subhierarchy may vary at a particular evaluation time. However, in the next section it will be shown that the constraint evaluation for the candidates in (17) is also influenced by pragmatic factors.

(17)

|                              | *Non-Spec <sub>N</sub> /Human | *Spec <sub>N</sub> /Human |
|------------------------------|-------------------------------|---------------------------|
| ☺ a. the left eye of the man | *                             |                           |
| ☺ b. the man's left eye      |                               | *                         |

The constraint \*Non-Spec<sub>N</sub>/Pronoun has the top rank in the subhierarchy in C<sub>4</sub>. If the possessor is a pronoun with a human reference, the use of the Saxon genitive is obligatory, cf. *her money* vs. \**the money of her*. Inanimate possessive pronouns exhibit a strong preference for the prenominal position, cf. *its condition*<sup>6</sup>. This indicates that \*Non-Spec<sub>N</sub>/Pronoun must be able to outrank constraints in other subhierarchies in English, in particular \*Spec<sub>N</sub>/Inanimate. By transitivity, this gives rise to the following constraint ranking:

(18) Partial constraint ranking for English

\*Non-Spec<sub>N</sub>/Pronoun >> \*Spec<sub>N</sub>/Inanimate >> \*Non-Spec<sub>N</sub>/Definite

(19)

|                        | *Non-Spec <sub>N</sub> /Pronoun | *Spec <sub>N</sub> /Inanimate |
|------------------------|---------------------------------|-------------------------------|
| ☺ a. its condition     |                                 | *                             |
| b. the condition of it | *!                              |                               |

Aissen's use of the Definiteness and Animacy Scales in predicting the realization of the possessor is reminiscent of the observations made in Hawkins (1981), Quirk et al. (1985), Jucker (1993), or Rosenbach (2002) on the choice between the Saxon genitive and the *of*-genitive in English noun phrases. Jucker (1993) proposes the following classes of nouns ordered according to the frequency with which they occur in the premodifying 's construction in the newspaper excerpts he analyzed:

(20) pronouns (*he*) > personal names (*Ted*) > animal nouns (*Fido*) > temporal nouns (*Monday*) > collective nouns (*government*) > geographical names (*London*) > personal nouns (*the boy*) > locative nouns (*world*) > abstract nouns (*freedom*) > concrete nouns (*roof*)

<sup>6</sup> I disregard here the fact that candidate (19b) is not a complete loser, since the phrase *?the condition of it* is possible, though dispreferred. The acceptability of this phrase is due to some factors which have been neglected so far, namely the discourse-pragmatic requirements (discussed below in section 5.3.2.) and the type of the possessive relation. Rosenbach (2002) observes that the phrase in question involves non-prototypical possession (i.e. abstract possession). Prenominal possessors (i.e. Saxon genitives) are more likely to denote prototypical possession (e.g. legal ownership).



The order of possessors on Jucker's scale is clearly influenced by their degree of definiteness and their position on the Animacy Hierarchy. These two factors (i.e. animacy and definiteness) are intertwined. Geographical names, e.g. *London*, are likely to occur in the prenominal position in a noun phrase, as in *London's history*, *London's population*, since they are high on the definiteness hierarchy (by virtue of being proper names).

The well-formedness of phrases such as *London's population* shows that the constraint which penalizes proper nouns in the *of*-phrase cannot be ranked lower than the constraint which prohibits inanimate nouns as prenominal possessors in English. In order to simplify the discussion, it will be assumed here that the former constraint actually outranks the latter one<sup>7</sup>, i.e.  $*\text{Non-Spec}_N/\text{PN} \gg * \text{Spec}_N/\text{Inanimate}$ . The constraint ranking given in (18) can be now expanded into (21). Notice that the assumption that  $*\text{Non-Spec}_N/\text{Pronoun}$  outranks  $*\text{Non-Spec}_N/\text{PN}$  in English follows from the constraint subhierarchy  $C_4$  given in (14) (which predicts that this ranking is language universal).

(21) Partial constraint ranking for English:

- $*\text{Non-Spec}_N/\text{Pronoun} \gg * \text{Non-Spec}_N/\text{PN} \gg * \text{Spec}_N/\text{Inanimate} \gg$
- $*\text{Non-Spec}_N/\text{Definite}$

The tableau in (22) shows the evaluation of two linearization patterns for a given nominal, i.e. *(the) history of London* and *London's history*. The ranking  $*\text{Non-Spec}_N/\text{PN} \gg * \text{Spec}_N/\text{Inanimate}$  selects candidate (b) as more optimal.

(22)

|                          | $*\text{Non-Spec}_N/\text{PN}$ | $* \text{Spec}_N/\text{Inanimate}$ |
|--------------------------|--------------------------------|------------------------------------|
| a. the history of London | *!                             |                                    |
| ☺ b. London's history    |                                | *                                  |

<sup>7</sup> Since geographical names can also occur as postnominal genitives, e.g. *the history of London*, we could make an assumption that  $*\text{Non-Spec}_N/\text{PN}$  and  $* \text{Spec}_N/\text{Inanimate}$  are tied constraints. This would result in evaluating both candidates in tableau (22) as equally optimal. In Jucker's text samples, geographical names occurred as prenominal possessors more frequently than common nouns with human reference, e.g. *the man*. Within the stochastic version of OT, the distance between the constraints  $*\text{Non-Spec}_N/\text{PN}$  and  $* \text{Spec}_N/\text{Inanimate}$  on the constraint hierarchy would be regarded as greater than the distance between the constraints employed in (17), i.e.  $* \text{Spec}_N/\text{Human}$  and  $*\text{Non-Spec}_N/\text{Human}$ .

Other languages show more serious constraints on prenominal possessives. Romance languages allow prenominal possessors to be formed only from pronouns (De Wit 1997, Giorgi and Longobardi 1991). De Wit (1997) states that in Dutch only proper names and kinship terms can occur in the prenominal genitive (i.e. possessive) position, e.g. *Peters moeder* 'Peter's mother' (note also the contrast between *Amerika's ontdekking door Columbus* 'America's discovery by Columbus' and *\*de stads verwoesting* 'the city's destruction'). The next section will show that the constraints postulated above for English prenominal possessors can be employed with reference to Polish possessives.

### 5.3.3. Harmonic alignment and referential nouns in Polish (and other Slavic languages)

Aissen (2002) employs the harmonic alignment of prominence scales to predict the possibilities of using prenominal possessives in Czech. Let us note that this is reminiscent of the analysis of possessive adjectives carried out in Corbett (1987).

When discussing the formation of possessive adjectives in Slavic, Corbett (1987) makes reference to grammatical hierarchies, namely the Definiteness Hierarchy and the Specificity Hierarchy. He suggests that the higher the referent is on both those hierarchies, the more likely is the derivation of a possessive adjective.

In Czech, possessive forms are available mainly from human nouns of masculine or feminine gender, e.g. *otcovo jablko* 'father's apple', *vědčova kniha* 'the scientist's book'. The possessor nouns must be definite and singular. Possessives corresponding to Neuter human nouns are ungrammatical, e.g. *\*dítětin pokoj* 'child's room'. The same is true of possessives related to inanimate nouns and nouns denoting institutions, e.g. *\*stolova noha* 'table.Poss leg', *\*fakultin tajemník* 'faculty.Poss secretary'. Possessive forms can be derived from nouns denoting animals (especially proper names), e.g. *Alíkova miska* 'Alik's plate' (where *Alik* is a name of a dog), and *srniny oči* 'doe's eyes'. Possessive pronouns can refer either to animate or inanimate antecedents, e.g. *její jméno* 'her/its name', *jejich dům* 'their house' (cf. Veselovská 1998, Comrie 1976, Corbett 1987).

In Bulgarian, possessive forms are derived mainly from kinship terms and names, e.g. *maminijat apartament* 'the mother's flat', *Vazovo stixotvo-*

*renie* 'Vazov's poem', rarer from common nouns which denote humans and animals (Corbett 1987: 310).

With reference to Russian, Babyonyshev (1997) identifies five types of nouns which give rise to prenominal possessives: names (*Borisova komnata* 'Boris's room'), kinship terms (*papina kniga* 'father's book'), pronouns (*moja kniga* 'my book'), animal nouns (*koškina lapa* 'the cat's paw') and profession/title designations (e.g. *aktrisinina mašina* 'the actress's car'). The nouns which give rise to possessives must be definite, refer to single individuals and cannot be premodified<sup>8</sup>.

Polish possessive adjectives are formed mainly from personal pronouns (cf. section 1.3.). As in the case of English, pronominal possessors of referential nouns in Polish cannot occur as adnominal genitives, i.e. *\*matka mnie* 'mother.Nom me.Gen', *\*koszula ciebie* 'shirt.Nom you.SgGen', or *\*długość go* 'length it.Gen'. It is irrelevant whether the pronominal possessor has animate or inanimate reference. This shows that the partial ranking established in (18) for English – where *\*Non-Spec<sub>N</sub>/Pronoun* dominates *\*Spec<sub>N</sub>/Inanimate* – is also valid for Polish.

Some linguists provide examples of Polish possessive adjectives formed from personal nouns, profession/title designations and kinship terms, such as those in (23) (see, among others, Topolińska 1981 and Jędrzejko 1993). As was mentioned in section 1.3., such denominal adjectives tend to be avoided nowadays. They are replaced by adnominal genitives, as in *siostra Hanki* 'sister Hanka.Gen' or *sukienka babci* 'dress grandma.Gen':

- (23) a. *Hanczyna siostra* 'Hanka.PossAdj sister'  
 b. *babcina sukienka* 'grandma.PossAdj dress'  
 c. *sołtysowa stodoła* 'village administrator.PossAdj barn'

For speakers who regularly employ possessive adjectives derived from lexical nouns, the alignment of the Animacy and the Nominal Scales predicts that animate (especially human) nouns make better prenominal possessors than inanimate nouns. The noun phrases *sołtysowa stodoła* 'village administrator.PossAdj. barn' and *ojcowa rada* 'father.PossAdj advice' are acceptable while the nominal *\*domowy dach* 'house.PossAdj roof' is ill-formed. The latter phrase would be normally replaced by *dach domu* 'roof house.Gen', which consists of the head noun followed by the adnominal genitive. The degree of definiteness of the possessor is less relevant.

<sup>8</sup> There are possessives formed from complex names and kinship terms, e.g. *Mar'i Ivanovna korova* 'Maria Ivanovna's cow', and *teti Katina kniga* 'aunt Katja's book'.

(24)

|                                    | *Spec <sub>N</sub> /Inanimate | *Non-Spec <sub>N</sub> /Definite |
|------------------------------------|-------------------------------|----------------------------------|
| ☺ a. dach domu<br>'roof house.Gen' |                               | *                                |
| b. domowy dach<br>'house.Adj roof' | *!                            |                                  |

If the possessor is an animate noun and refers to an animal or a human being, two linearization patterns are possible. One of the ways in which this can be predicted is by postulating the equal strength of two rival constraints, e.g. \*Non-Spec<sub>N</sub>/Animate and \*Spec<sub>N</sub>/Animate in (25), or \*Non-Spec<sub>N</sub>/Human and \*Spec<sub>N</sub>/Human in (26).

(25)

|                               | *Non-Spec <sub>N</sub> /Animate | *Spec <sub>N</sub> /Animate |
|-------------------------------|---------------------------------|-----------------------------|
| ☺ a. ogon kota 'tail cat.Gen' | *                               |                             |
| ☺ b. koci ogon 'cat.Adj tail' |                                 | *                           |

(26)

|                                                  | *Non-Spec <sub>N</sub> /Human | *Spec <sub>N</sub> /Human |
|--------------------------------------------------|-------------------------------|---------------------------|
| ☺ a. sukienka babci<br>'dress grandma.Gen'       | *                             |                           |
| ☺ b. babcina sukienka<br>'grandma.PossAdj dress' |                               | *                         |

How can we account for the acceptability judgments of native speakers of Polish (especially younger ones) who reject the noun phrases in (23), hence find candidate (b) in tableau (26) ill-formed? We might propose that in the constraint system of the latter type of speakers the crucial role is performed by the high-ranked constraint \*Spec<sub>N</sub>/Lex. This constraint prohibits lexical nouns from occurring as prenominal possessors (i.e. from giving rise to possessive adjectives in Polish). It arises from the alignment of the NP type hierarchy (i.e. Pronoun > Lexical Noun) with the Nominal Scale (Spec<sub>N</sub> > Non-Spec<sub>N</sub>). It must be able to outrank the constraint \*Non-Spec<sub>N</sub>/Human, which prohibits human possessors from surfacing as adnominal genitives.

(27) Partial constraint ranking in Polish for younger speakers (first version):

\*Spec<sub>N</sub>/Lex >> \*Non-Spec<sub>N</sub>/Human

In the constraint hierarchies proposed above for English the constraint  $*\text{Spec}_N/\text{Lex}$  was not employed, since it was more important to distinguish between nouns exhibiting various degrees of definiteness (i.e. pronouns, proper names, nouns with definite reference, indefinite specific and indefinite non-specific). In the case of Polish, the split between pronominal and non-pronominal possessors appears to be particularly important. This might provide support for postulating a single constraint which would prohibit all non-pronominal possessors from surfacing as possessive adjectives. Given the ranking proposed in (27), candidate (b) with the pronominal possessive adjective loses in the constraint evaluation performed by younger speakers of Polish.

(28)

|                     | $*\text{Spec}_N/\text{Lex}$ | $*\text{Non-Spec}_N/\text{Human}$ |
|---------------------|-----------------------------|-----------------------------------|
| ☺ a. sukienka babci |                             | *                                 |
| b. babcina sukienka | *!                          |                                   |

Notice, however, that younger speakers of Polish are likely to accept both candidates given in tableau (25). This tableau considers argument linking in Polish referential nouns with animal possessors. An *ad-hoc* solution to this problem would be to make the new constraint, i.e.  $*\text{Spec}_N/\text{Lex}$ , in a tie with the constraint which prohibits names of animals as adnominal genitives (i.e.  $*\text{Non-Spec}_N/\text{Animate}$ ):

(29)

|                               | $*\text{Spec}_N/\text{Lex}$ | $*\text{Non-Spec}_N/\text{Animate}$ |
|-------------------------------|-----------------------------|-------------------------------------|
| ☺ a. ogon kota 'tail cat.Gen' | *                           |                                     |
| ☺ b. koci ogon 'cat.Adj tail' |                             | *                                   |

The resulting analysis would be, however, counter-intuitive and would have to be rejected. Since human nouns are higher on the Animacy Scale than nouns denoting animals, it would come as surprise that the animal possessor can surface either as the pronominal or postnominal modifier while the human possessor is restricted to the less prominent (i.e. postnominal) position. Moreover, the partial ranking of constraints stemming from the tableaux in (28) and (29), i.e.  $\{*\text{Spec}_N/\text{Lex}, *\text{Non-Spec}_N/\text{Animate}\} \gg *\text{Non-Spec}_N/\text{Human}$ , would contradict the constraint sub-hierarchy postulated as language-universal in  $C_2$ .

Formation of possessive adjectives in Polish can be regarded as a lexical process<sup>9</sup>, hence the acceptability of forms such as *babciny* 'grandma.PossAdj', *Hanczyny* 'Hanka.PossAdj' or *dyrektorowy* 'director.PossAdj', may ultimately be a matter of the individual lexicon.

The adjective *koci* 'cat.Adj' does not contain the suffix *-ow-* or *-in-/yn-*, in contrast to the forms *babciny* 'grandma.PossAdj', or *Jankowy* 'Janek.PossAdj'<sup>10</sup>. It does not belong to the group of possessive adjectives proper, also referred to as "genitival adjectives" (cf. Migdalski 2001, Dimitrova-Vulchanova and Giusti 1998), which always make reference to a particular individual.

In many Slavic languages names of animals can give rise to possessive adjectives proper (derived by means of the suffix *-in-*), e.g. Russian *kośkina lapa* 'the cat's paw', or Czech *srniny oči* 'doe's eyes'. In Polish, on the other hand, the zero-derived adjectives *koci* 'cat.Adj', *tygrysi* 'tiger.Adj', *lisi* 'fox.Adj' or *psi* 'dog.Adj' can either make reference to a specific individual (i.e. a particular cat, tiger, or dog), or to a type of animal, as in *kocia żywność* 'food for cats', *koci hotel* 'hotel for cats', *lisia nora* 'foxes' den', or *orle gniazdo* 'nest inhabited by eagles'. The adjectives in (30) correspond either to genitives with the referential reading or with the type-reading (see Partee and Borschev 2000 for more discussion of type genitives).

- (30) a. Puszek zaczął miauczeć, więc nalałam trochę mleka do kocięj miski.  
'Fluffy started miaowing so I poured some milk into the cat's bowl'.  
b. Znalazłam adres nowego sklepu z kocią żywnością i kocimi ubraniami.  
'I found the address of a new shop with cats' food and cats' clothes'.

Moreover, the adjective *koci* 'cat.Adj' can occur in the property-reading, i.e. it can be paraphrased as 'typical of a cat, similar to those of a cat', e.g. *kocie oczy* 'cat-like eyes'. This is the reason why denominal adjectives formed from names of animals, e.g. *koci* 'cat.Adj', or *mysi* 'mouse.Adj', can be included in the group of attributive adjectives, together with adjectives terminating in the suffix *-ski*, e.g. *dyrektorski* 'related to a/the manager; managerial', *braterski* 'typical of a brother; brotherly'. Attributive adjectives are not formed from proper nouns since rarely does a need arise to refer to properties typical of particular human beings, e.g. \**Ma-*

<sup>9</sup> The lexical derivation of Slavic possessive forms is assumed in, among others, Rappaport (1998), Trugman (2000) and Migdalski (2000). Babyonyshev (1997), in contrast, regards such Russian possessives as derived syntactically.

<sup>10</sup> Such adjectives can be regarded as formed from related nouns by means of a paradigmatic formative, which also involves the palatalization of the stem-final consonant (see Grzegorzczkova et al. 1984: 422).

*riolskie oczy* 'eyes typical of Mariola', *\*Piotrska odwaga* 'courage typical of Piotr'.

This is an interesting case of interaction between the lexicon and rules mapping argument structure onto syntax in referential noun phrases. The constraints regulating the argument linking predict the possibility of both prenominal and postnominal position of possessors which are animal and human nouns. If the lexicon of a particular native speaker lacks possessive adjectives related to human, especially proper, nouns, the linearization pattern [Prenominal PossAdj + Head Noun] has no realization<sup>11</sup>.

In the case of animal possessors in Polish, the lexicon provides denominal adjectives which allow either an attributive or a purely relational (i.e. referential or type) reading. This is why the option [Prenominal Possessor + Head Noun] is realized.

## 5.4. Argument linking in deverbal nominals

### 5.4.1. Aligning the Thematic Hierarchy and the Nominal Scale in English deverbal nominals

When discussing argument linking in referential nouns, Aissen (2002) makes no reference to semantic roles. This is because she focuses on the morphosyntactic realization of arguments with the role of Possessor. Below we will examine the alignment of structural positions with thematic roles and the Person Hierarchy in event nominals in English and Polish. We will follow Legendre et al. (1993) who formulated principles mapping semantic arguments of verbs onto abstract morphosyntactic cases. We will avoid using constraints which align semantic roles with grammatical functions<sup>12</sup>, in view of the controversies concerning the identification of POSS elements, mentioned at the end of section 5.2.

<sup>11</sup> Babyonyshev (1997) notes lexical and morphological restrictions on the formation of prenominal possessives in Russian. She points out the contrast between the acceptability of possessives derived from synonymous nouns, e.g. *\*materina kniga* vs. *mamina kniga* 'mother's book', or *\*otcov stul* vs. *papin stul* 'father's chair'.

<sup>12</sup> As a matter of fact, it is possible to claim that Spec<sub>N</sub> is not only a structural position but also a grammatical function. When analyzing clauses, Bresnan (2001) distinguishes between argument functions (such as Object, Subject) and discourse functions

Let us recall from Chapter 1 that there is a strong preference for the Agent-like reading of the prenominal genitive in English deverbal nominals (e.g. *the mother's loss*, *the doctor's examination*). This preference can be stated in OT terms as falling out naturally from the harmonic alignment of the Nominal Scale with the Thematic Hierarchy. It is more harmonic to associate the Agent role than the Patient role with the prenominal position in English. Both  $\text{Spec}_N$  and Agent are placed at the top of the relevant prominence scales, as is indicated by the harmony scales below. Consequently, the constraint which prohibits the harmonic association of  $\text{Spec}_N$  and Agent must be ranked fairly low in English. The constraint  $^*\text{Spec}_N/\text{Agent}$  is ranked cross-linguistically below constraints which prohibit the association of the Specifier position with other semantic roles. This is predicted by the constraint subhierarchy given in (31) below. For the postnominal *of*-phrase position, referred to as the Non-Spec(ifier) position in Aissen (2002), it is most harmonic to associate it with semantic roles located along the "lower" end of the Thematic Hierarchy.

- (31) Proposal: aligning structural positions with thematic roles in English nominals:

Hierarchies:

$D_1$ :  $\text{Spec}_N > \text{Non-Spec}_N$

$D_2$ :  $\text{Ag}(\text{ent}) > \text{Pat}(\text{ient})$

Harmony scales:

$H_x$ :  $\text{Spec}_N/\text{Ag} > \text{Spec}_N/\text{Pat}$  (i.e. it is more harmonic to have a possessive with the function of Agent than one with the function of Patient)

$H_y$ :  $\text{Non-Spec}_N/\text{Pat} > \text{Non-Spec}_N/\text{Ag}$  (i.e. it is more harmonic to have the adnominal post-head genitive with the function of Patient than one with the function of Agent)

Constraint subhierarchies:

$C_x$ :  $^*\text{Spec}_N/\text{Pat} \gg ^*\text{Spec}_N/\text{Ag}$  (i.e. the constraint against having possessive Patients is ranked higher than the constraint against having possessive Agents)

$C_y$ :  $^*\text{Non-Spec}_N/\text{Ag} \gg ^*\text{Non-Spec}_N/\text{Pat}$

(i.e. TOPIC and FOCUS). Bresnan (2001) adds that the TOP(ic) function often coincides with the SUB(ject) function in English clauses. Since there are grounds for drawing parallels between the packaging of information structure in clauses and in nominals, we could suggest that the  $\text{Spec}_N$  position is associated with a discourse function, which could be referred to as "TOP<sub>NP</sub>" (i.e. Topic of a noun phrase). This would agree with the analyses, summarized in Chapter 1, which view possessors as topics or reference-points.



Let us illustrate the influence of the constraint subhierarchies above on the choice between the two syntactic patterns for the nominal corresponding to the sentence *The enemy (Ag) destroyed the city (Pat)*. The selection of the linearization pattern *the enemy's (Ag) destruction of the city (Pat)*, instead of the potential rival candidate *\*the city's (Pat) destruction of the enemy (Ag)*, is done by the constraints  $*\text{Spec}_N/\text{Pat}$  and  $*\text{Non-Spec}_N/\text{Ag}$ .

(32) Input: N *destruction* argument 1: Agent/*the enemy*; argument 2: Patient/*the city*

|                                          | $*\text{Spec}_N/\text{Pat}$ | $*\text{Non-Spec}/\text{Ag}$ |
|------------------------------------------|-----------------------------|------------------------------|
| ☺ a. the enemy's destruction of the city |                             |                              |
| b. the city's destruction of the enemy   | *!                          | *                            |

To simplify the discussion, these two constraints are treated as unranked in the tableau above (which is signalled by the dashed line between them).

As is shown further in section 5.4.2.,  $*\text{Spec}_N/\text{Pat}$  is violated in passive nominals, e.g. *the city's destruction*. As for  $*\text{Non-Spec}/\text{Ag}$ , its violability is suggested by the occurrence of subjective post-head genitives, e.g. *the attack of the bees*, or *the cheering of the crowd*, *the whimpering of the baby*. Note, however, that many English nominals with *of*-genitives denoting subjects correspond to intransitive verbs analyzed as unaccusatives in Levin and Rappaport-Hovav (1995), e.g. *the arrival of the Prime Minister*. In the case of such nominals, illustrated further in (33) below, it could be argued that no violation of  $*\text{Non-Spec}/\text{Ag}$  is involved, since the internal argument expressed as the post-head genitive denotes the Patient or Theme<sup>13</sup>.

- (33) a. the return of the soldiers                      d. the cooking of the rice  
       b. the emergence of a new leader            e. the melting of the snow  
       c. the departure of the train                 f. the death of John

The mechanism of the harmonic alignment of the Thematic Hierarchy with the Nominal Scale captures the effects of Anderson's Experienter (and Affectedness) Constraint in English nominals. For instance, it predicts the ill-formedness of the phrases *\*the stories' amusement of us*,

<sup>13</sup> See Nunes (1993) for more discussion of *of*-phrases denoting subjects of transitive and intransitive nominals in English.

and *\*the scarecrow's fright of the children*, in which the prenominal possessives denote not the experiencers but the stimuli of emotions. The harmony scales in (31) are derived by aligning the Nominal Scale with a subpart of the Thematic Hierarchy, i.e. Ag > Pat. When the longer version of the Thematic Hierarchy is employed, as proposed in (22) in Chapter 2, it can be shown that the association of the prenominal position with the role of the Experiencer is more harmonic than its association with the role of Neutral (i.e. the stimulus of emotions).

(34) Hierarchies:

D<sub>1</sub>: Spec<sub>N</sub> > Non-Spec<sub>N</sub>

D<sub>2</sub>: Ag(ent) > Beneficiary > Experiencer > Instrument > Pat(ient) > Neutral > Locative

Harmony scales:

H<sub>x</sub>: Spec<sub>N</sub>/Ag > Spec<sub>N</sub>/Beneficiary > Spec<sub>N</sub>/Experiencer > Spec<sub>N</sub>/Instrument > Spec<sub>N</sub>/Pat > Spec<sub>N</sub>/Neutral > Spec<sub>N</sub>/Locative

H<sub>y</sub>: Non-Spec<sub>N</sub>/Locative > Non-Spec<sub>N</sub>/Neutral > Non-Spec<sub>N</sub>/Pat > Non-Spec<sub>N</sub>/Instrument > Non-Spec<sub>N</sub>/Experiencer > Non-Spec<sub>N</sub>/Beneficiary > Non-Spec<sub>N</sub>/Ag

Constraint subhierarchies:

C<sub>x</sub>: \*Spec<sub>N</sub>/Locative >> \*Spec<sub>N</sub>/Neutral >> \*Spec<sub>N</sub>/Pat >> \*Spec<sub>N</sub>/Instrument >> \*Spec<sub>N</sub>/Experiencer >> \*Spec<sub>N</sub>/Beneficiary >> \*Spec<sub>N</sub>/Ag

C<sub>y</sub>: \*Non-Spec<sub>N</sub>/Ag >> \*Non-Spec<sub>N</sub>/Beneficiary >> \*Non-Spec<sub>N</sub>/Experiencer >> \*Non-Spec<sub>N</sub>/Instrument >> \*Non-Spec<sub>N</sub>/Pat >> \*Non-Spec<sub>N</sub>/Neutral >> \*Non-Spec<sub>N</sub>/Locative

For the clarity of the exposition, we repeat in (35) the parts of the constraint subhierarchies in (34) which are most relevant for the argument linking in nominals derived from Experiencer verbs:

(35) Parts of the constraint subhierarchies:

C<sub>x</sub>: \*Spec<sub>N</sub>/Neutral >> \*Spec<sub>N</sub>/Experiencer

C<sub>y</sub>: \*Non-Spec<sub>N</sub>/Experiencer >> \*Non-Spec<sub>N</sub>/Neutral

These constraint subhierarchies are responsible for the selection of candidate (a), instead of candidate (b)<sup>14</sup>, in the tableau below:

<sup>14</sup> We do not consider here the question why *\*John's (Exp) amusement of the stories* (Neutral) is ill-formed. Within the framework of LFG, *at the stories* represents a different grammatical function than *of the stories*. The former carries a semantically restricted oblique grammatical function (OBL<sub>g</sub>) while the latter can be treated either as expressing the OBL<sub>th</sub> function or the semantically unrestricted POSS function (see the discussion in Laczko 1997).

(36) Input: N *amusement* argument 1: Experiencer/ *John*; argument 2: Neutral/ *the stories*

|                                      | *Spec <sub>N</sub> /Neutral | *Spec <sub>N</sub> /Experiencer |
|--------------------------------------|-----------------------------|---------------------------------|
| ☺ a. John's amusement at the stories |                             | *                               |
| b. the stories' amusement of John    | *!                          |                                 |

The application of the constraints in question to nominalizations of verbs denoting emotions and cognition calls for an additional comment. As was mentioned in Chapter 4, some researchers (including A r a d 1998 and B i a ł y 2004) have recently postulated that psych verbs should be split into three groups of predicates, which differ in their event structure and in the number of (structure) participants. The verb *amuse* belongs to non-stative ObjExp verbs, which are analyzed as complex events, therefore it should be able to license two structure participants (i.e. the Experiencer and the Neutral/Stimulus). However, B i a ł y (2004), following Rozwadowska's work in progress<sup>15</sup>, proposes that non-stative ObjExp verbs, such as *amuse*, *irritate*, or *frighten*, allow for two structure participants only in their agentive usage, exemplified by the sentence *Mary (deliberately) frightened the children (with her ghost stories)*. In their non-agentive usage such verbs can license only one structure participant (i.e. the Experiencer). This is because the first subevent of the non-agentive predicate *amuse* (i.e. the causing subevent) does not refer to an individual. Consequently, the event templates of non-agentive non-stative ObjExp verbs involve only one event variable, and license one structure participant.

If we adopted the analysis of psych-nominals in B i a ł y (2004) and excluded the constant participant (bearing the role of Neutral) from the input to the tableau in (36), this could account for the ill-formedness of *\*the stories' amusement of John*. As argued in R o z w a d o w s k a (2004), the projection of arguments in deverbal nominals is determined by the event templates (and the number of event variables). No recourse to thematic relations borne by NPs is necessary. The noun phrase *the stories* is not a structure participant hence it is not available as a prenominal possessive in English.

Nevertheless, we take a different position in the present study. There are at least two reasons why we think that the analysis proposed in tableau (36) is attractive.

<sup>15</sup> This proposal is also consonant with the conclusions of Rozwadowska's earlier analysis (see R o z w a d o w s k a 1997), where all psych-predicates were interpreted as single-participant eventualities.

Firstly, the link between the number of structure participants in the event templates of predicates and the distribution of arguments, postulated in Biały (2004) and Rozwadowska (2004), is not direct. The identification of SubjExp verbs (e.g. *interesować się* 'to be interested in', *lubić* 'to like', *znać* 'to know') as denoting simple events might suggest that the non-participant (or, rather, constant participant) referring to the stimulus of a stative emotion does not need syntactic realization (as has been suggested in the case of constant participants of SWEEP in Rappaport-Hovav and Levin 1998). This is not the case, as is shown by the incompleteness of the Polish sentences *\*Maria interesuje się* 'Mary is interested in...', *\*Tomek zna* 'Tom knows...' (see also the nominal *zainteresowanie Marii* *\*(Jankiem)* 'Mary's interest (in John)'). Biały (2004), following Rozwadowska's work in progress, suggests that the stimulus of emotion must be syntactically expressed in the above-mentioned sentences (and nominals) since such emotions cannot exist without the simultaneous presence of the causing event (i.e. the stimulus). Thus, his analysis involves further complications.

Secondly, the restriction postulated in Rozwadowska (2004) in order to ban constant participants from being realized syntactically as possessives in nominals is too strong. It makes incorrect predictions, disallowing for English "quasi-passive nominals" discussed in Chapter 4 of the present study, e.g. *its knowledge* or *its perception*<sup>16</sup>. In contrast, the Optimality-theoretic constraint *\*Spec<sub>N</sub>/Neutral* interacts with other constraints resulting from the alignment of grammatical hierarchies (as is shown in the following sections). Therefore, violations of *\*Spec<sub>N</sub>/Neutral* are expected.

Consequently, in the tableaux postulated in the present chapter we will include noun phrases which may be argued to have the status of constant participants of psych predicates, e.g. *the history* in tableau (37) below, since they can ultimately be realized in the argument position, either in sentential constructions (cf. *John knows history*) or in derived nominals (cf. *its knowledge*).

The interaction of the two constraints mentioned in (36) indicates also that *John's knowledge of history* is more optimal than *\*the history's knowledge of John*.

<sup>16</sup> An advantage of the analysis postulated in Rozwadowska (2004) is the prediction that constant participants in Polish nominals from psych predicates do not surface in the agentive adjunct phrase, cf. *\*zachwyt Marka przez Marię* 'Marek's admiration for Maria'.

(37) Input: N *knowledge* argument 1: Experiencer/ *John*; argument 2: Neutral/ *history*

|                                    | *Spec <sub>N</sub> /Neutral | *Spec <sub>N</sub> /Experiencer |
|------------------------------------|-----------------------------|---------------------------------|
| ☺ a. John's knowledge of history   |                             | *                               |
| b. the history's knowledge of John | *!                          |                                 |

Another comment is due on the status of implicit arguments in the input to tableaux. In Chapter 4 and in section 5.2., we have suggested that "active" nominals which lack the overt realization of Agent or Experiencer argument can be analyzed as noun phrases which contain an implicit subject-like argument, e.g. *the knowledge of history*, *the love of Mary*, *the sinking of the boat*, or *the destruction of the city*. In this section we will make the assumption that implicit arguments have a bearing on the argument linking in active and "quasi-passive nominals", hence they should be listed in the input for constraint evaluation.

Since the implicit Experiencer argument in the tableau below is not mapped onto the Specifier position, neither candidate (a) nor (b) violates the constraint \*Spec<sub>N</sub>/Experiencer. The choice in tableau (38) is made by the constraint which prohibits the semantic role of Neutral from being expressed in the specifier position.

(38) Input: N *knowledge* argument 1: Experiencer/implicit; argument 2: Neutral/ *history*

|                               | *Spec <sub>N</sub> /Neutral | *Spec <sub>N</sub> /Experiencer |
|-------------------------------|-----------------------------|---------------------------------|
| ☺ a. the knowledge of history |                             |                                 |
| b. the history's knowledge    | *!                          |                                 |

Some problems are posed by the constraint evaluation for candidates which contain *by*-phrases.

In the OT-LFG model of argument linking outlined in Aissen (1999) for clausal structures, arguments expressed as *by*-phrases enter the competition for syntactic slots (i.e. for grammatical functions). Aissen (1999) employs the grammatical function Passive Agent (Agt), which is situated on the relational scale (i.e. on the Grammatical Functions Hierarchy) below Subject, i.e. Subject > Object; Subject > Passive Agent. If we were to adopt the insights from Aissen's analysis of passive clauses, we might treat *by*-phrases in event nominals as expressing non-implicit (or unsuppressed) arguments. For instance, the input for the phrase *the destruction of the city by the enemy* could contain *the enemy* and *the city* both

marked as being low in prominence. The constraint which penalizes non-prominent elements in the Spec(ifier) position would evaluate the candidate *the enemy's destruction of the city* as non-harmonic, hence the rival candidate, i.e. *the destruction of the city by the enemy*, would be the winner. Notice, however, that the alignment of the Thematic Hierarchy with the extended Nominal Scale, i.e. Spec<sub>N</sub> > of-phrase > by-phrase (proposed by analogy to Aissen's relational scale Subject > Object > Passive Agent), could produce counterintuitive harmony scales and undesirable constraint subhierarchies. For instance, the constraint \*Ag/by-phrase would dominate \*Ag/of-phrase, since the association of Agent with of-phrase would be (incorrectly) judged as more harmonic than the association of Agent with by-phrases. Similarly, the constraint \*Patient/of-phrase would be ranked higher than \*Patient/by-phrase. One would need to posit additional constraints or conditions to penalize Patient by-phrases.

Consequently, we adopt here the position argued for in Chapter 4, namely that by-phrases (and *przez*-phrases in Polish) are optional adjuncts<sup>17</sup> licensed by implicit Agent arguments. For the purposes of the present study, it will be assumed that the input for the phrase *the destruction of the enemy by the city* is the same as for the phrase *the destruction of the city*, hence the constraint evaluation proceeds in the same way.

## 5.4.2. The importance of the information structure in noun phrases

Let us have a closer look at some nominals in which two linearization patterns are equally possible, i.e. *the left eye of the man* and *the man's left eye*, or *the destruction of the city* and *the city's destruction*. One way of accounting for the well-formedness of those alternative patterns is to regard them as related to slightly different inputs.

As was noted in, among others, Taylor (1996), or Anschutz (1997), the choice between the linearization variants in question is determined by the topic-focus articulation within the noun phrase. Elements which appear in the prenominal possessive position are more

<sup>17</sup> Notice that by-phrases in nominals are not regarded as argumental in, among others, Roeper (1987), Dowty (1989), or Grimshaw (1990).

topic-worthy than the elements which appear in the postnominal *of*-phrase, and typically refer to entities introduced in the preceding sentence(s).

Let us recall from the discussion in Aissen (1999) and Legendre et al. (1993), that the input for a clausal structure may be assumed to include information about the discourse prominence of particular arguments. Consequently, an active sentence, e.g. *John punched Bill on the nose*, corresponds to a different input than a passive sentence, e.g. *Bill was punched on the nose by John*. The input for *John punched Bill on the nose* contains the argument *John* pre-specified as prominent (since it functions as the topic) while *Bill* is pre-specified as having low discourse-prominence. In the input for the passive sentence, on the other hand, it is the argument *Bill* which is pre-specified as discourse-prominent (i.e. as a topic).

If we follow the analysis outlined in Aissen (1999) for clausal structures, we will regard the linearization pattern *the man's left eye* as the winner in the case when *the man* is pre-specified in the input as being more conceptually (and discourse) prominent.

The constraint which selects *the man's left eye* as the winner is one which prohibits the position of the non-specifier of the noun phrase from being associated with high discourse prominence, i.e.  $*\text{Non-Spec}_N/X$ . This constraint can be derived by aligning the Nominal Scale with the Discourse Prominence Scale:

(39) Hierarchies:

$D_1$ : (Nominal Scale):  $\text{Spec}_N > \text{Non-Spec}_N$

$D_2$ : (Discourse/Conceptual Prominence Scale):  $X > x$  (where  $X$  and  $x$  refer to high and low prominence, respectively)

Harmony scales:

$H_x$ :  $\text{Spec}_N/X > \text{Spec}_N/x$

$H_y$ :  $\text{Non-Spec}_N/x > \text{Non-Spec}_N/X$

Constraint subhierarchies:

$C_x$ :  $*\text{Spec}_N/x \gg * \text{Spec}_N/X$

$C_y$ :  $*\text{Non-Spec}_N/X \gg * \text{Non-Spec}_N/x$

No matter whether  $*\text{Non-Spec}_N/X$  is ranked above or below the tied constraints  $*\text{Non-Spec}_N/\text{Human}$  and  $*\text{Spec}_N/\text{Human}$ , candidate (b), i.e. *the man's left eye*, is selected as the winner, since the other candidate, i.e. *the left eye of the man*, incurs more violations of constraints<sup>18</sup>.

<sup>18</sup> Notice that the dashed line can represent, as in (40), either constraints which are unranked or those which are recognized as tied.

(40) Input: N: (*left*) *eye* argument 1: X/Possessor/*man*

|                            | *Non-Spec <sub>N</sub> /Human | *Spec <sub>N</sub> /Human | *Non-Spec <sub>N</sub> /X |
|----------------------------|-------------------------------|---------------------------|---------------------------|
| a. the left eye of the man | *                             |                           | *!                        |
| ☺ b. the man's left eye    |                               | *                         |                           |

Tableau (41), in turn, shows that the candidate with the postnominal *of*-phrase is evaluated as more optimal when the argument *the city* is pre-specified as having low prominence. The other candidate, i.e. *the man's left eye*, violates \*Spec<sub>N</sub>/x and \*Spec<sub>N</sub>/Human. The ranking between \*Spec<sub>N</sub>/x, \*Spec<sub>N</sub>/Human, and \*Non-Spec<sub>N</sub>/Human is irrelevant for the constraint evaluation in (41), hence they are represented as unranked.

(41) Input: N: (*left*) *eye* argument 1: x/Possessor/*man*

|                              | *Spec <sub>N</sub> /x | *Non-Spec <sub>N</sub> /Human | *Spec <sub>N</sub> /Human |
|------------------------------|-----------------------|-------------------------------|---------------------------|
| ☺ a. the left eye of the man |                       | *                             |                           |
| b. the man's left eye        | *!                    |                               | *                         |

The selection of the winning candidate for the event nominal denoting the single-participant eventuality, i.e. *the city's destruction*, can proceed along similar lines. The input contains *the city* pre-specified as being discourse-prominent (i.e. as functioning as the topic). If \*Non-Spec<sub>N</sub>/X is ranked above \*Spec<sub>N</sub>/Patient, candidate (a), i.e. *the city's destruction*, is selected as the winner, since the other candidate, i.e. *the destruction of the city*, incurs a fatal violation of the higher-ranked constraint.

(42) Input: N *destruction*, argument 1: X/Patient/*the city*

|                                | *Non-Spec <sub>N</sub> /X | *Spec <sub>N</sub> /Patient |
|--------------------------------|---------------------------|-----------------------------|
| ☺ a. the city's destruction    |                           | *                           |
| b. the destruction of the city | *!                        |                             |

One could wonder what would happen if the argument *the city* in (42) were pre-specified as having low prominence. As is tentatively suggested in (43), the candidate *the destruction of the city* will be then evaluated as more optimal. The other candidate, i.e. *the city's destruction*, violates both \*Spec<sub>N</sub>/x and \*Spec<sub>N</sub>/Patient. Since no evidence is given at the moment



to indicate which of those constraints is ranked higher, they are presented as unranked in tableau (43).

(43) Input: N *destruction*, argument 1: x/Patient/*the city*

|                                  | *Spec <sub>N</sub> /x | *Spec <sub>N</sub> /Patient |
|----------------------------------|-----------------------|-----------------------------|
| a. the city’s destruction        | *!                    | *                           |
| ☺ b. the destruction of the city |                       |                             |

Notice, however, that the phrase *the destruction of the city* is compatible with Agent-oriented modifiers and purpose clauses, which implies the presence of a syntactically non-inert Agent argument. We suggest here that in “genuine passive nominals”, the single Patient argument is obligatorily pre-specified for cognitive prominence, hence it cannot surface in the post-head position<sup>19</sup>. In the case of two-argument nominals, the Patient argument can either exhibit or lack discourse prominence. Consequently, it can occur either in the pre-head or post-head position, i.e. *the destruction of the city by the enemy* and *the city’s destruction by the enemy* (or *Tibet’s colonization by China* and *the colonization of Tibet by China*).

5.4.3. English passive nominals and the Animacy Scale

As noticed in Huddleston (1984), Quirk et al. (1985), or Taylor (1994), object possessives in English sound most felicitous when they denote human participants. They are less felicitous when they have animate non-personal reference, and decidedly worse when they have inanimate reference. This is illustrated by the difference in the acceptability of the phrases *the man’s examination by the doctor* and *\*the wreckage’s examination by experts*, or the phrases given in (44) and (45):

- (44) a. the man’s release from prison, ?the dog’s release from quarantine, \*the information’s release from government
- b. your father’s removal from the Board of Directors, \*the tree’s removal
- c. Poland’s invasion, ?my privacy’s invasion
- d. America’s discovery, \*our common interests’ discovery
- e. the minister’s dismissal, \*his suggestion’s dismissal (from Taylor 1994)

<sup>19</sup> Alternatively, we could propose that the phrase *the destruction of the city* is ambiguous between denoting a two-participant eventuality, or a single-participant eventuality.

- (45) a. the doctor's removal from the board  
 b. ?the error's removal from the draft (from Huddleston 1984: 20)

Given a potential two-argument passive nominal *removal* with the inanimate Patient argument *the tree*, the application of the constraints familiar from section 5.3. predicts correctly the ill-formedness of the variant with the pre-head possessive.

- (46) Input: N *removal*, argument 1: Agent/implicit; argument 2: Patient/*the tree*

|                              | *Spec <sub>N</sub> /Inanimate | *Non-Spec <sub>N</sub> /Definite |
|------------------------------|-------------------------------|----------------------------------|
| ☺ a. the removal of the tree |                               | *                                |
| b. the tree's removal        | *!                            |                                  |

The application of the constraints from section 5.3. in the evaluation of the nominal *removal* with the animate Patient argument *your father* results in both candidates, i.e. *your father's removal* and *the removal of your father*, judged as equally optimal.

- (47) Input: N *removal*, argument 1: Agent/implicit; argument 2: Patient/*your father*

|                                 | *Non-Spec <sub>N</sub> /Human | *Spec <sub>N</sub> /Human |
|---------------------------------|-------------------------------|---------------------------|
| ☺ a. the removal of your father | *                             |                           |
| ☺ b. your father's removal      |                               | *                         |

As suggested in the previous section, the phrases in (47a) and (47b) can be regarded as winning candidates associated with slightly different inputs. The variant with the pre-head possessive emerges as the winner if the Patient participant is marked as discourse-prominent (as in tableau 48): either in single-argument or in two-argument passive nominals. The variant with the post-head *of*-phrase is related to the two-argument input (with the implicit Agent argument), in which the Patient argument is not pre-specified for discourse prominence.

- (48) Input: N *removal*, argument 1: Agent/implicit; argument 2: X/Patient/*your father*

|                               | *Non-Spec <sub>N</sub> /Human | *Spec <sub>N</sub> /Human | *Non-Spec <sub>N</sub> /X | *Spec <sub>N</sub> /Patient |
|-------------------------------|-------------------------------|---------------------------|---------------------------|-----------------------------|
| a. the removal of your father | *                             |                           | *!                        |                             |
| ☺ b. your father's removal    |                               | *                         |                           | *                           |

The constraint  $*\text{Non-Spec}_N/\text{X}$  has no influence on the evaluation of the nominal *\*the tree's removal*, since it is dominated by the constraint which penalizes inanimate nouns in the pre-head position (i.e. by  $*\text{Spec}_N/\text{Inanimate}$ ).

(49) Input: N *removal*, argument 1: Agent/implicit; argument 2: X/Patient/*the tree*

|                              | $*\text{Spec}_N/\text{Inanimate}$ | $*\text{Non-Spec}_N/\text{X}$ | $*\text{Spec}_N/\text{Patient}$ |
|------------------------------|-----------------------------------|-------------------------------|---------------------------------|
| ☺ a. the removal of the tree |                                   | *                             |                                 |
| b. the tree's removal        | *!                                |                               | *                               |

The constraint against inanimate possessors, i.e.  $*\text{Spec}_N/\text{Inanimate}$ , is ranked higher than the constraint penalizing prominent elements in the specifier position. The constraint  $*\text{Spec}_N/\text{Inanimate}$  is, however, outranked by  $*\text{Non-Spec}_N/\text{PN}$ . This explains the felicity of the candidate *Tibet's colonization (by China)*, whose Patient participant is a personal noun (PN).

(50) Input: N *colonization* argument 1: Agent/implicit; argument 2: X/Patient/*Tibet*

|                              | $*\text{Non-Spec}_N/\text{PN}$ | $*\text{Spec}_N/\text{Inanimate}$ | $*\text{Non-Spec}_N/\text{X}$ | $*\text{Spec}_N/\text{Patient}$ |
|------------------------------|--------------------------------|-----------------------------------|-------------------------------|---------------------------------|
| a. the colonization of Tibet | *!                             |                                   | *                             |                                 |
| ☺ b. Tibet's colonization    |                                | *                                 |                               | *                               |

There might be a question asked why English allows for the grammaticality of the passive nominal *the city's destruction*. *The city* has an inanimate reference. In contrast to *Tibet*, it is a common noun, hence the constraint  $*\text{Non-Spec}_N/\text{PN}$  cannot be employed to account for the outranking of  $*\text{Spec}_N/\text{Inanimate}$ . Taylor (1989: 674) suggests that names of places and institutions are higher on the "gender hierarchy" (i.e. the Animacy Hierarchy) than other nouns with inanimate reference<sup>20</sup>. Notice that names of places and institutions in English can occur as prenominal possessors to pre-modify referential nouns, e.g. *the inner city's crime rate*, *the club's pianist*.

In conclusion, it was shown above that the behaviour of the Patient participant in English passive nominals resembles the behaviour of Possessors in referential nominals in its sensitivity to the Animacy Hierarchy and

<sup>20</sup> It might be useful to add a constraint referring specifically to the former class of nouns (i.e. *a city*, *a club*) and penalizing their occurrence in *of*-phrases. Alternatively, we could suggest that the personification of inanimate nouns takes place in such phrases as *the club's pianist*. We leave this issue for future research.

the Definiteness Hierarchy. The same constraints that evaluate referential nominals, e.g.  $*\text{Spec}_N/\text{Inanimate}$ ,  $*\text{Non-Spec}_N/\text{PN}$ , and  $*\text{Non-Spec}_N/\text{Human}$ , are crucial in evaluating the felicity of English passive nominals.

#### 5.4.4. Justifying further constraint rankings

The ranking of the constraints adopted in the previous section is in agreement with the hierarchy proposed in Rosenbach (2002) with respect to the importance of factors which influence the speaker's choice between the Saxon genitive and the *of*-genitive in English. She regards animacy as more important than topicality (and the type of the possessive relation denoted by the possessives).

Now, however, we would like to introduce further changes in the hierarchy. We suggest that the constraint which prohibits proper nouns from the non-specifier (i.e. post-head) position is dominated by the constraint which penalizes non-prominent elements in the pre-head position, i.e.  $*\text{Spec}_N/x$ . Therefore, one can attest in texts such phrases as *the invasion of Poland*, or *the death of John*. They win the evaluation when the Patient argument is not prominent.

The constraint  $*\text{Spec}_N/x$  was mentioned as a part of the universal constraint subhierarchy in (39), produced by aligning the Nominal Scale with the Discourse Prominence Scale. However, its language-particular ranking in English (i.e. with respect to constraints from other subhierarchies) was not clearly established. We propose that this constraint is top ranked in the selection of the constraints relevant in tableau (51).

(51) Input: N *invasion* argument 1: Agent/implicit; argument 2: x/Patient/*Poland*

|                             | $*\text{Spec}_N/x$ | $*\text{Non-Spec}_N/\text{PN}$ | $*\text{Spec}_N/\text{Inanimate}$ | $*\text{Non-Spec}_N/X$ | $*\text{Spec}_N/\text{Patient}$ |
|-----------------------------|--------------------|--------------------------------|-----------------------------------|------------------------|---------------------------------|
| ☺ a. the invasion of Poland |                    | *                              |                                   |                        |                                 |
| b. Poland's invasion        | *!                 |                                | *                                 |                        | *                               |

The tied constraints  $*\text{Spec}_N/\text{Human}$  and  $*\text{Non-Spec}_N/\text{Human}$  were omitted in (51), since they have no effect on the evaluation of the candidates. They must be located below  $*\text{Spec}_N/\text{Inanimate}$ , given the universal constraint subhierarchy  $*\text{Spec}_N/\text{Inanimate} \gg * \text{Spec}_N/\text{Human}$ . It has not been determined whether  $*\text{Spec}_N/\text{Human}$  and  $*\text{Non-Spec}_N/\text{Human}$  dominate or are dominated by the two constraints employed in (50)

and (51), namely \*Non-Spec<sub>N</sub>/X and \*Spec<sub>N</sub>/Patient. The latter two constraints are ranked below \*Spec<sub>N</sub>/Inanimate, just as \*Spec<sub>N</sub>/Human and \*Non-Spec<sub>N</sub>/Human are.

\*Non-Spec<sub>N</sub>/X and \*Spec<sub>N</sub>/Patient do not interact with yet another constraint postulated in earlier sections of this chapter, namely \*Non-Spec<sub>N</sub>/Def (cf. section 5.3.2.). Until valid arguments are considered to identify the dominance relations between the three constraints in question, \*Non-Spec<sub>N</sub>/Def will be treated as unranked with respect to \*Non-Spec<sub>N</sub>/X and \*Spec<sub>N</sub>/Patient.

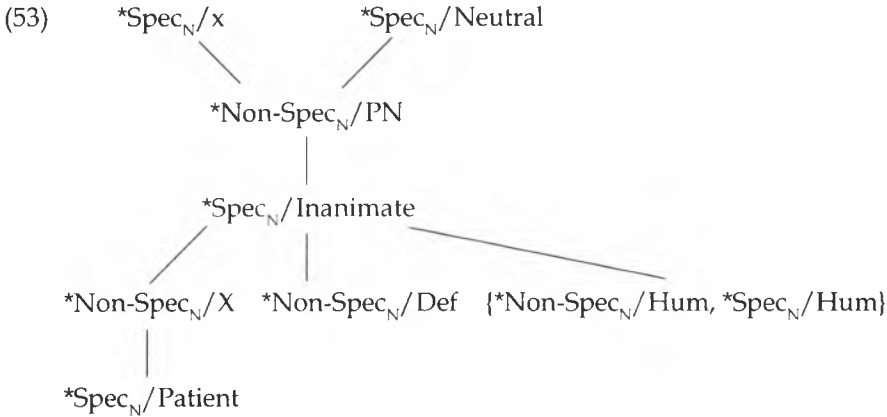
With regard to the constraint \*Non-Spec<sub>N</sub>/X, there is evidence indicating that it is ranked below \*Spec<sub>N</sub>/Neutral in English. Even if the argument with the role of Neutral were discourse-prominent, it could not surface in the prenominal position, cf. *\*the history's knowledge*.

(52) Input: N *knowledge* argument 1: Experiencer/implicit; argument 2: X/Neutral/*history*

|                               | *Spec <sub>N</sub> /Neutral | *Non-Spec <sub>N</sub> /X |
|-------------------------------|-----------------------------|---------------------------|
| ☺ a. the knowledge of history |                             | *                         |
| b. the history's knowledge    | *!                          |                           |

There is evidence indicating that \*Spec<sub>N</sub>/Neutral is ranked above the constraints which refer to the animacy and definiteness of the Neutral participant (i.e. \*Non-Spec<sub>N</sub>/PN and \*Spec<sub>N</sub>/Inanimate). The phrases *\*Africa's knowledge* and *\*John's knowledge* (in the sense of *the knowledge of John*) are ill-formed.

Dominance relations between constraints can be represented on a hierarchical tree structure. The diagram in (53) represents the partial rankings proposed here between the constraints for English.



Tree diagrams are particularly useful when representing relations between constraints which are unranked with respect to each other (cf. McCarthy 2002), e.g.  $*\text{Non-Spec}_N/\text{Def}$  and  $*\text{Spec}_N/\text{Patient}$ , or  $*\text{Spec}_N/x$  and  $*\text{Spec}_N/\text{Neutral}$ . However, it is usually more convenient to use linear representations of constraint rankings, such that have been employed here so far. In order to convert the tree diagram in (53) into a linear ranking in (54), we will employ braces<sup>21</sup> as a symbol for either tied constraints, such as  $\{*\text{Non-Spec}_N/\text{Hum}, *\text{Spec}_N/\text{Hum}\}$ , or unranked constraints, e.g.  $\{*\text{Spec}_N/x, *\text{Spec}_N/\text{Neutral}\}$ . Since it is rather awkward to represent the position of  $*\text{Non-Spec}_N/\text{Def}$  and  $\{*\text{Non-Spec}_N/\text{Hum}, *\text{Spec}_N/\text{Hum}\}$  in the “flattened” version of the constraint ranking, and since the three constraints in question are generally of little importance in the evaluation of the candidates in the tableaux to follow, they will be omitted from the partial constraint ranking proposed in (54).

(54) Partial constraint ranking for English:

$\{*\text{Spec}_N/x, *\text{Spec}_N/\text{Neutral}\} \gg *\text{Non-Spec}_N/\text{PN} \gg *\text{Spec}_N/\text{Inanimate} \gg$   
 $*\text{Non-Spec}_N/X \gg *\text{Spec}_N/\text{Patient}$

Although  $*\text{Spec}_N/\text{Neutral}$  has a high rank in English, it can be violated, as will be shown in the next section.

#### 5.4.5. “Quasi-passive nominals” and local conjunction of constraints

In Chapter 4, a group of Polish nominals with object-type possessives, such as *wcześniejse jej odesłanie do rodziców dla uniknięcia skandalu* ‘sending her back to her parents earlier to avoid the scandal’, were analyzed as two-argument and two-participant eventualities. They exhibit all the diagnostics of the presence of an implicit Agent-type argument. They were referred to as “quasi-passive nominals”.

As was mentioned in Chapter 1, in some varieties of English (especially in the language of newspapers), the argument with the role Neutral can appear preminally if it is discourse-prominent and expressed by a pronoun, e.g. *its knowledge, its discussion by experts*. In Chapter 4 such nominals were recognized as instantiations of “quasi-passive nominals” in English. They do contain an implicit Agent-type (i.e. Agent or

<sup>21</sup> In McCarthy (2002) braces represent tied constraints only.

Experiencer) argument. The implicit argument can license *by*-phrases, e.g. *its* (= i.e. *the matter's*) *discussion by experts*, *its* (= *the poem's*) *memorization by students*, *its* (= *the formality's*) *perception by others*, *its* *perusal by Mary*, *their* (= *the drugs'*) *confiscation by the police*, *its* (= *the law's*) *annulment by the authorities*.

In section 5.3.2. above the constraint  $*\text{Non-Spec}_N/\text{Pronoun}$  was postulated for English, to account for the well-formedness of the phrase *its condition*, as well as for the difference between the acceptability of *its leg* and the unacceptability of *\*the chair's leg*. This constraint was able to outrank the constraint  $*\text{Spec}_N/\text{Inanimate}$ , which states the preference for associating the specifier position in noun phrases with animate possessors.  $*\text{Non-Spec}_N/\text{Pronoun}$  is involved in the constraint evaluation of the candidates *the knowledge of it* and *its knowledge*. It outranks the constraint  $*\text{Spec}_N/\text{Neutral}$  and acts in unison with (though is higher ranked than)  $*\text{Non-Spec}_N/\text{X}$ , as is shown in tableau (56).

(55) Partial constraint ranking (for English):

$*\text{Non-Spec}_N/\text{Pronoun} \gg * \text{Spec}_N/\text{Neutral} \gg * \text{Non-Spec}_N/\text{PN} \gg * \text{Spec}_N/\text{Inanimate} \gg * \text{Non-Spec}_N/\text{X} \gg * \text{Spec}_N/\text{Patient}$

(56) Input: N *knowledge* argument 1: Experiencer/implicit; argument 2: X/Neutral/3SgN

|                        | $*\text{Non-Spec}_N/\text{Pronoun}$ | $*\text{Spec}_N/\text{Neutral}$ | $*\text{Non-Spec}_N/\text{X}$ |
|------------------------|-------------------------------------|---------------------------------|-------------------------------|
| a. the knowledge of it | *!                                  |                                 | *                             |
| ☺ b. its knowledge     |                                     | *                               |                               |

It needs to be pointed out, though, that the phrase *the knowledge of it* is well-formed in English. We propose that the candidate *the knowledge of it* emerges as the winner when the pronominal argument is pre-specified in the input as having low discourse prominence.

In assuming that there is a difference in the information packaging in the linearization patterns *the knowledge of it* and *its knowledge* we depart from the position taken in, among others, Valld & v í and Engdahl (1996) or Lambrecht (1994). They assert that weak pronouns have no influence on the structuring of information in a clause, and act only as grammatical place-holders. However, although the pronouns *it* and *its* both denote given information, the pre-head possessive *its* shows higher cognitive and discourse prominence than the post-head pronoun *it*.

We propose that  $*\text{Spec}_N/\text{x}$  outranks  $*\text{Non-Spec}_N/\text{Pronoun}$  and selects candidate (a) (with the postnominal *of*-phrase).

(57) Partial constraint ranking (for English):

\*Spec<sub>N</sub>/x >> \*Non-Spec<sub>N</sub>/Pronoun >> \*Spec<sub>N</sub>/Neutral >> \*Non-Spec<sub>N</sub>/PN  
>> \*Spec<sub>N</sub>/Inanimate >> \*Non-Spec<sub>N</sub>/X >> \*Spec<sub>N</sub>/Patient

Given the constraint ranking in (57), we are able to predict the optimal choice in tableau (58) for the non-passive nominal *the knowledge of it*, and in tableau (59), for the “quasi-passive nominal” *its memorization (by the students)*. The constraint \*Spec<sub>N</sub>/x is violated by none of the rival candidates in tableau (59).

(58) Input: N *knowledge* argument 1: Experiencer/implicit; argument 2: x/Neutral/3SgN

|                          | *Spec <sub>N</sub> /x | *Non-Spec <sub>N</sub> /<br>Pronoun | *Spec <sub>N</sub> /<br>Neutral | *Non-Spec <sub>N</sub> /<br>X |
|--------------------------|-----------------------|-------------------------------------|---------------------------------|-------------------------------|
| ☺ a. the knowledge of it |                       | *                                   |                                 |                               |
| b. its knowledge         | *!                    |                                     | *                               |                               |

(59) Input: N *memorization* argument 1: Experiencer/implicit; argument 2: X/Neutral/3SgN

|                           | *Spec <sub>N</sub> /x | *Non-Spec <sub>N</sub> /<br>Pronoun | *Spec <sub>N</sub> /<br>Neutral | *Non-Spec <sub>N</sub> /<br>X |
|---------------------------|-----------------------|-------------------------------------|---------------------------------|-------------------------------|
| a. the memorization of it |                       | *!                                  |                                 | *                             |
| ☺ b. its memorization     |                       |                                     | *                               |                               |

There are, however, further complications in the argument realization of English nominals. Taylor (1994: 224) observes: “No amount of contextual manipulation is able to sanction an objective reading of *Louise's love*, and this despite the fact that *Louise*, being a human nominal, is already high in inherent topicality. Nor does a topicalizing context facilitate an objective reading of *John's recollection*”. He shows that the replacement of the lexical argument bearing the Neutral semantic role by a pronoun in the latter phrase (i.e. *his recollection*) does not improve its well-formedness in English, while a corresponding example in Italian (in 60c) is fully acceptable.

- (60) a. Concerning those events, their recollection still frightens me.  
b. \*Concerning John, his recollection still frightens me.  
c. A proposito di Gianni, il suo ricordo ancora mi spaventa.

The sentences in (61) below indicate that the acceptability judgments in corresponding examples from Polish are similar to those in Italian. The



pronominal possessive with the role of Neutral can denote either a person or a thing.

- (61) a. Jeśli chodzi o prace Marksa, to ich cytowanie jest teraz w złym guście.  
 'Concerning Marx's works, quoting them (lit. their quoting) is now in bad taste'.  
 b. Jeśli chodzi o twoich przyjaciół, to ich wspomnianie w obecności mojej matki jest zabronione.  
 'Concerning your friends, mentioning them (lit. their recollection) in my mother's presence is forbidden'.

The set of the constraints given in (57) could predict the well-formedness of (60c) in Italian and (61) in Polish. Still, it needs to be modified further to account for the difference between the unacceptability of the pronoun with the animate (human) reference in *\*his* (Neutral) *recollection* and the felicity of the inanimate pronoun in *its recollection* in English. The fact that the pronominal possessive in *his recollection*, *John's recollection*, *Louise's love* or *her love* is interpreted as having the role of Experiencer rather than of Experienced (Neutral) implies the need for a constraint *\*Hum/Neutral*. It penalizes the association of the Neutral semantic role with nouns referring to humans.

There is a problem, though, concerning the place of *\*Hum/Neutral* in the constraint hierarchy employed so far. In order to account for the difference between *\*his* (Neutral) *recollection* and *its recollection* we might want to posit *\*Hum/Neutral* as ranked higher than *\*Non-Spec<sub>N</sub>/Pronoun*, which in turn dominates the constraint *\*Spec<sub>N</sub>/Neutral*. Notice, however, that this would not bring a desirable result. Since both candidates in (62) violate *\*Hum/Neutral*, the next constraint in the hierarchy, i.e. *\*Non-Spec<sub>N</sub>/Pronoun*, is decisive and selects (incorrectly) the phrase *\*his* (Neutral) *recollection*. The violation of the constraint *\*Spec<sub>N</sub>/Neutral* incurred by candidate (b) is irrelevant, as *\*Spec<sub>N</sub>/Neutral* needs to be ranked lower than *\*Non-Spec<sub>N</sub>/Pronoun*, as was indicated in tableau (58), when evaluating the candidates *its knowledge* and *the knowledge of it*.

- (62) Input: N *recollection* argument 1: Experiencer/implicit; argument 2: X/Neutral/3SgM (first version)

|                            | *Hum/<br>Neutral | *Non-Spec <sub>N</sub> /<br>Pronoun | *Spec <sub>N</sub> /<br>Neutral | *Non-Spec <sub>N</sub> /<br>X |
|----------------------------|------------------|-------------------------------------|---------------------------------|-------------------------------|
| a. the recollection of him | *                | *!                                  |                                 | *                             |
| ⊗ b. his recollection      | *                |                                     | *                               |                               |

Moreover, the constraint \*Hum/Neutral cannot be high-ranked in English, as is indicated by the acceptability of arguments with human reference and with the role of Neutral in the postnominal (*of*-phrase) position, i.e. *the love of Louise/her* (or *the love for Louise/her*), and *the recollection of John/him*. We might presume that \*Hum/Neutral is outranked in such examples by the constraint which requires non-prominent arguments to be expressed in the *of*-phrase (i.e. \*Non-Spec<sub>N</sub>/X). Unfortunately, this would be contrary to the implications of our previous discussion, since in the tableau above \*Hum/Neutral needs to outrank \*Non-Spec<sub>N</sub>/X. Notice also that \*Hum/Neutral is not a top-ranked constraint in English. It is frequently violated in clausal structures, e.g. *John loves Louise, I could not see Bill*.

A way of solving the dilemma in OT framework is by resorting to local conjunction. In descriptive terms, pronominal arguments denoting stimuli of emotions (or cognition) can occur as possessives (i.e. in the pre-head position) only when they denote inanimate entities. There is a good rationale for it<sup>22</sup>. Observe that inanimate possessives cannot denote Experiencers (since Experiencers are sentient beings), hence no ambiguity results as to the interpretation of the phrase *its recollection*. The restriction against the object-like interpretation of *his* in *his recollection* removes the potential ambiguity of the phrase, since the pronoun is obligatorily given the subject-like reading and is interpreted as the Experiencer.

In OT terms, the violation of \*Hum/Neutral is fatal only when it incurs at the same time the violation of \*Spec<sub>N</sub>/Neutral. Each of these two constraints can be violated on its own when this is required in order to avoid violating a higher ranked constraint, e.g. \*Non-Spec<sub>N</sub>/Pronoun. In other words, the constraint \*Hum/Neutral is top-ranked in English only when it is locally conjoined with \*Spec<sub>N</sub>/Neutral, i.e. \*Hum/Neutral & \*Spec<sub>N</sub>/Neutral. Let us consider again the choice between the candidates in tableau (64), which is a revised version of (62).

(63) The constraint ranking (for English):

\*Hum/Neutral & \*Spec<sub>N</sub>/Neutral >> \*Spec<sub>N</sub>/x >> \*Non-Spec<sub>N</sub>/Pronoun >>  
 \*Spec<sub>N</sub>/Neutral >> \*Non-Spec<sub>N</sub>/PN >> \*Spec<sub>N</sub>/Inanimate >> \*Non-Spec<sub>N</sub>/X  
 >> \*Spec<sub>N</sub>/Patient

<sup>22</sup> Notice that the existence or lack of functional motivation does not determine the strength of a constraint in a given language. As is observed in Bresnan and Aissen (2002), the strength of a constraint is a conventional property of a language-particular grammar.

- (64) Input: N *recollection* argument 1: Experiencer/implicit; argument 2: X/Neutral/3SgM (second version)

|                              | *Hum/Neutral<br>&*Spec <sub>N</sub> /Neutral | *Non-Spec <sub>N</sub> /Pronoun | *Spec <sub>N</sub> /Neutral | *Non-Spec <sub>N</sub> /X |
|------------------------------|----------------------------------------------|---------------------------------|-----------------------------|---------------------------|
| ☺ a. the recollection of him |                                              | *                               |                             | *                         |
| b. his recollection          | *!                                           |                                 | *                           |                           |

In Italian (as well as in Polish) the constraints \*Hum/Neutral and \*Spec<sub>N</sub>/Neutral are not locally conjoined. The hypothetical constraint \*Hum/Neutral&\*Spec<sub>N</sub>/Neutral in Polish would have approximately the same rank as \*Spec<sub>N</sub>/Neutral, and would not be able to override the constraint \*Non-Spec<sub>N</sub>/Pronoun (which penalizes pronominal arguments in the postnominal position).

It seems, thus, that the constraint evaluation for the two candidates in the Polish nominal *ich wspomnianie* 'mentioning/recollecting them' proceeds as in (65), and the constraints \*Non-Spec<sub>N</sub>/Pronoun, \*Spec<sub>N</sub>/Neutral, and \*Non-Spec<sub>N</sub>/X would be ranked in the same way in English as in Polish.

The ranking between these constraints in Polish can be established on the basis of acceptability judgments given by those native speakers of Polish who employ possessive adjectives derived from proper names (cf. Topolińska 1981). The evidence for ranking \*Spec<sub>N</sub>/Neutral below \*Non-Spec<sub>N</sub>/Pronoun (but above \*Non-Spec<sub>N</sub>/X) in Polish could be provided by the contrast between the ill-formedness of the phrase \**Jankowe* (Neutral) *wspominanie* 'Janek.PossAdj mentioning', when the pronominal possessive denotes the person who is being mentioned or remembered, and the well-formedness of the phrase *Jankowe* (Patient) *wydalenie z uczelni* (lit. Janek.PossAdj relegating from university) 'Janek's being relegated from the university'. Note also the acceptability of the corresponding phrases with the pronominal object possessive *jego* 'his', i.e. *jego* (Neutral) *wspominanie* 'remembering/mentioning him', *jego* (Patient) *wydalenie z uczelni* 'his being relegated from the university'.

- (65) Input: N *wspominanie* 'recollecting, mentioning' argument 1: Experiencer/implicit; argument 2: X/Neutral/3Pl

|                      | *Non-Spec <sub>N</sub> /Pronoun | *Spec <sub>N</sub> /Neutral | *Non-Spec <sub>N</sub> /X |
|----------------------|---------------------------------|-----------------------------|---------------------------|
| a. wspomnianie ich   | *!                              |                             | *                         |
| ☺ b. ich wspomnianie |                                 | *                           |                           |

Building upon the analysis of the syntactic variation between the phrases *its knowledge* and *the knowledge of it* in (56) and (58) above (or *the memorization of it* and *its memorization*), we propose that candidate (a), i.e. *wspominanie ich* ‘mentioning them.Gen’, can win the constraint evaluation when the argument bearing the semantic role Neutral is not prominent, as shown in the tableau below in (67). Its rival, i.e. *ich wspominanie* ‘(lit. their mentioning) mentioning them’, is eliminated then by the constraint which penalizes non-prominent possessors, namely \*Spec<sub>N</sub>/x.

(66) Partial constraint ranking (for Polish):

\*Spec<sub>N</sub>/x >> \*Non-Spec<sub>N</sub>/Pronoun >> \*Spec<sub>N</sub>/Neutral >> \*Non-Spec<sub>N</sub>/X

(67) Input: N *wspominanie* ‘recollecting, mentioning’ argument 1: Experiencer/implicit; argument 2: x/Neutral/3PI

|                             | *Spec <sub>N</sub> /x | *Non-Spec <sub>N</sub> /<br>Pronoun | *Spec <sub>N</sub> /<br>Neutral | *Non-Spec <sub>N</sub> /X |
|-----------------------------|-----------------------|-------------------------------------|---------------------------------|---------------------------|
| ☺ a. <i>wspominanie ich</i> |                       | *                                   |                                 |                           |
| b. <i>ich wspominanie</i>   | *!                    |                                     | *                               |                           |

#### 5.4.6. Aligning the Person Scale with the Thematic Hierarchy

There is a further wrinkle in the analysis of argument linking in Polish “quasi-passive nominals”. While in English the possibility of the possessive realization of the pronominal Neutral argument was constrained by the animacy of this participant, in Polish it is determined by the person feature of the pronoun.

As was shown in Chapter 1, the replacement of the third person pronoun by the first or second person pronoun results in the ill-formedness (or marginal acceptability) of “quasi-passive nominals”. The phrase ??*wasze wspominanie* ‘your mentioning/recollecting’ sounds odd, unless the pronominal possessive is given the Experiencer reading and the occurrence of the implicit object-type argument (carrying the role of Neutral) is assumed. In order to account for these facts, recourse should be taken to the harmonic alignment of the Person Scale and the Thematic Hierarchy (as was suggested in Cetnarowska 2001a). The Person Scale, familiar from Chapter 2, includes the local persons (i.e. first and second person) placed above the non-local person (i.e. third person).

## (68) Hierarchies:

D<sub>1</sub>: Local > 3<sup>rd</sup> [where Local = 1<sup>st</sup>, 2<sup>nd</sup> person]D<sub>2</sub>: Ag(ent) > Beneficiary > Experiencer > Instrument > Pat(ient) > Neutral > Locative

Harmony scales:

H<sub>x</sub>: Local/Ag > Local/Beneficiary > Local/Experiencer > Local/Instrument > Local/Pat > Local/Neutral > Local/LocativeH<sub>y</sub>: 3<sup>rd</sup>/Locative > 3<sup>rd</sup>/Neutral > 3<sup>rd</sup>/Pat > 3<sup>rd</sup>/Instrument > 3<sup>rd</sup>/Experiencer > 3<sup>rd</sup>/Beneficiary > 3<sup>rd</sup>/Ag

Constraint subhierarchies:

C<sub>x</sub>: \*Local/Locative >> \*Local/Neutral >> \*Local/Pat >> \*Local/Instrument >> \*Local/Experiencer >> \*Local/Beneficiary >> \*Local/AgC<sub>y</sub>: \*3<sup>rd</sup>/Ag >> \*3<sup>rd</sup>/Beneficiary >> \*3<sup>rd</sup>/Experiencer >> \*3<sup>rd</sup>/Instrument >> \*3<sup>rd</sup>/Pat >> \*3<sup>rd</sup>/Neutral >> \*3<sup>rd</sup>/Locative

The constraint \*Local/Neutral will need to be locally conjoined with \*Spec<sub>N</sub>/Neutral. \*Local/Neutral on its own is frequently violated in Polish (as well as in English). Although it is located fairly high in the constraint subhierarchy in C<sub>x</sub>, it must be dominated by constraints from other subhierarchies. Observe that the constraint \*Local/Neutral is too weak to prohibit the occurrence of sentences, in Polish or English, containing first or second person arguments which carry the Neutral role, e.g. *Piotr widział mnie wczoraj w kinie* 'Peter (Exp) saw me (Neutral) in the cinema yesterday'. Moreover, \*Local/Neutral is not powerful enough to eliminate nominals such as *obserwowanie was* 'watching you.PIGen'.

The locally conjoined constraint \*Local/Neutral&\*Spec<sub>N</sub>/Neutral will be decisive in selecting candidate (a) with the pronominal second person Neutral argument expressed as an adnominal genitive. Even if the pronominal argument were pre-specified as having high prominence (as shown in 69), it would not be able to surface as the possessive.

(69) Input: N *wspominanie* 'recollecting, mentioning' argument 1: Experiencer/implicit; argument 2: X/Neutral/2Pl

|                             | *Local/Neutral&<br>*Spec <sub>N</sub> /Neutral | *Non-Spec <sub>N</sub> /<br>Pronoun | *Spec <sub>N</sub> /<br>Neutral | *Non-Spec <sub>N</sub> /<br>X |
|-----------------------------|------------------------------------------------|-------------------------------------|---------------------------------|-------------------------------|
| ☺ a. <i>wspominanie was</i> |                                                | *                                   |                                 | *                             |
| b. <i>wasze wspomnianie</i> | *!                                             |                                     | *                               |                               |

The constraint \*Local/Neutral can also be locally conjoined with \*Spec<sub>N</sub>/Patient, to penalize the occurrence of first and second person possessives

which carry the role of Patient (i.e. affected Theme), e.g. *??wasze pobicie* 'your being beaten up' or *\*twoje zamordowanie* 'your being murdered'. Notice that while the phrase *jego zamordowanie* 'his being murdered' is acceptable, the replacement of the third person by the local person (first or second) makes the phrase unacceptable. This suggests the need for the locally conjoined constraint  $*Local/Patient \& *Spec_N/Patient$ , which would be ranked higher than  $*Non-Spec_N/Pronoun$  and  $*Spec_N/Patient$ . Since  $*Spec_N/Patient$  is ranked below  $*Spec_N/Neutral$  in the universal constraint subhierarchy, and  $*Spec_N/Neutral$  is dominated by  $*Non-Spec_N/Pronoun$  in English, it follows that  $*Spec_N/Patient$  is dominated by  $*Non-Spec_N/Pronoun$  as well.

The ranking between  $*Spec_N/Patient$  and  $*Non-Spec_N/X$  in Polish is irrelevant for this particular constraint evaluation, hence we use the dashed line between them in the tableau. Although in English  $*Non-Spec_N/X$  dominates  $*Spec_N/Patient$ , the ranking between these constraints must be established for each language independently.

The two locally conjoined constraints, i.e.  $*Local/Neutral \& *Spec_N/Neutral$  and  $*Local/Patient \& *Spec_N/Patient$  are represented as unranked in (70), since there is no clear evidence for the difference in their strength in Polish. We can only expect the former locally conjoined constraint to dominate the latter constraint, since its conjuncts are higher in the universal constraint subhierarchies, i.e.  $*Local/Neutral \gg *Local/Patient$ , and  $*Spec_N/Neutral \gg *Spec_N/Patient$ .

(70) Partial constraint ranking (for Polish):

$\{ *Local/Neutral \& *Spec_N/Neutral; *Local/Patient \& *Spec_N/Patient \} \gg *Spec_N/x \gg *Non-Spec_N/Pronoun \gg *Spec_N/Neutral \gg \{ *Non-Spec_N/X, *Spec_N/Patient \}$

(71) Input: N *zamordowanie* 'murdering' argument 1: Agent/implicit; argument 2: X/Patient/2Pl

|                              | $*Local/Patient \& *Spec_N/Patient$ | $*Non-Spec_N/Pronoun$ | $*Spec_N/Patient$ | $*Non-Spec_N/X$ |
|------------------------------|-------------------------------------|-----------------------|-------------------|-----------------|
| ☺ a. <i>zamordowanie was</i> |                                     | *                     |                   | *               |
| b. <i>wasze zamordowanie</i> | *!                                  |                       | *                 |                 |

### 5.4.7. Local Patients in “genuine passive nominals” and SingPart

There are nominals in Polish which do contain Local Patients in the prenominal (specifier) position, e.g. *wasze uniewinnienie* ‘your.Pl acquittal’. These are precisely the “genuine passive nominals” in Polish, analyzed in this monograph as single-argument (and single-participant) eventualities. The locally conjoined constraint  $*\text{Local}/\text{Patient} \& * \text{Spec}_N/\text{Patient}$  must be then outranked by another constraint. In Cetnarowska (1999a) I postulated a constraint dubbed SingPart (i.e. Single Participant), which predicted that pronominal arguments of single-argument eventualities are expressed obligatorily as possessives.

(72) SingPart (first version)

The pronominal argument of single-participant Polish nominals can only appear in the possessive form.

Since SingPart contains an extra condition (notice that it applies to pronominal arguments only), it seems appropriate to restate it as (73) and assume that in Polish we have a case of the locally conjoined constraint SingPart (in its version given in 73<sup>23</sup>) and  $*\text{Non-Spec}_N/\text{Pronoun}$ .

(73) SingPart (second version)

The only argument of a single-participant nominal must appear in the  $\text{Spec}_N$  position.

The evaluation of the candidates for the “genuine passive nominal” *wasze uniewinnienie* ‘your acquittal’ is given in (74).

(74) Input: N *uniewinnienie* ‘acquittal’ argument 1: X/Patient/2Pl

|                                 | SingPart&<br>$*\text{Non-Spec}_N/\text{Pronoun}$ | $*\text{Local}/\text{Patient} \& * \text{Spec}_N/\text{Patient}$ | $*\text{Non-Spec}_N/\text{Pronoun}$ | $*\text{Spec}_N/\text{Patient}$ | $*\text{Non-Spec}_N/\text{X}$ |
|---------------------------------|--------------------------------------------------|------------------------------------------------------------------|-------------------------------------|---------------------------------|-------------------------------|
| a. <i>uniewinnienie</i> was     | *!                                               |                                                                  | *                                   |                                 | *                             |
| ☺ b. <i>wasze uniewinnienie</i> |                                                  | *                                                                |                                     | *                               |                               |

<sup>23</sup> SingPart is not derived from the harmonic alignment of some prominence scales. For the use of other constraints which make no reference to prominence scales in argument linking see, for instance, Wanner (2001).

Again, we need to account for the availability of both the “genuine passive nominal” *wasze uniewinnienie* ‘your.PI acquittal’, and the “active” nominal *uniewinnienie was* ‘acquitting you.PIGen’. The phrase *uniewinnienie was* ‘acquitting you’ emerges as the winner if the input contains two arguments (one of them being unexpressed, or licensing the *przez*-phrase). The locally conjoined constraint SingPart&\*Non-Spec<sub>N</sub>/Pronoun is not active (hence cannot be violated) in two-participant eventualities.

(75) Input: N *uniewinnienie* ‘acquittal’ argument 1: Agent/implicit; argument 2: X/Patient/2PI

|                               | SingPart&<br>*Non-Spec <sub>N</sub> /<br>Pronoun | *Local/<br>Patient&<br>*Spec <sub>N</sub> /<br>Patient | *Non-Spec <sub>N</sub> /<br>Pronoun | *Spec <sub>N</sub> /<br>Patient | *Non-Spec <sub>N</sub> /<br>X |
|-------------------------------|--------------------------------------------------|--------------------------------------------------------|-------------------------------------|---------------------------------|-------------------------------|
| ☺ a. <i>uniewinnienie was</i> |                                                  |                                                        | *                                   |                                 | *                             |
| b. <i>wasze uniewinnienie</i> |                                                  | *!                                                     |                                     | *                               |                               |

Let us add that the constraint SingPart, in spite of its rather stipulative manner of introduction, is further supported in Polish by the behaviour of single-argument eventualities which are derived from unaccusative verbs, e.g. *zniknąć* ‘to disappear’, or *omdleć* ‘to faint’. Although the candidate *moje zniknięcie* ‘my disappearance’ incurs a violation of both \*Local/Patient and \*Spec<sub>N</sub>/Patient (since the single argument of the verb *zniknąć* carries the role of Patient), the other candidate, i.e. *\*zniknięcie mnie* ‘disappearing me.Gen’, is judged as ill-formed by native speakers of Polish.

(76) Input: N *zniknięcie* ‘disappearance’ argument 1: X/Patient/1Sg

|                             | SingPart<br>&*Non-Spec <sub>N</sub> /<br>Pronoun | *Local/Patient<br>&*Spec <sub>N</sub> /<br>Patient | *Non-Spec <sub>N</sub> /<br>Pronoun | *Spec <sub>N</sub> /<br>Patient |
|-----------------------------|--------------------------------------------------|----------------------------------------------------|-------------------------------------|---------------------------------|
| a. <i>zniknięcie mnie</i>   | *!                                               |                                                    | *                                   |                                 |
| ☺ b. <i>moje zniknięcie</i> |                                                  | *                                                  |                                     | *                               |

For native speakers of Polish who use possessive adjectives derived from proper nouns and kinship terms, such as *Hanczyny* ‘Hanka.Poss Adj’ or *babciny* ‘grandma.PossAdj’, it can be shown that the constraint



SingPart is not an undominated constraint. The English phrase *grandma's fainting* can be translated into Polish either as the nominal with the possessive adjective, i.e. *babci<sub>N</sub>ne omdlenie* 'grandma.PossAdj fainting', or as the noun phrase with the adnominal genitive, i.e. *omdlenie babci* 'fainting grandma.Gen'.

The locally conjoined constraint SingPart&\*Non-Spec<sub>N</sub>/Pronoun is, in contrast, top-ranked in Polish. The phrase \**omdlenie go* 'fainting him.Gen', with the object pronoun denoting the single participant of the eventuality, is ill-formed (just as the phrase \**zniknięcie mnie* 'disappearance me.Gen' in the tableau above).

When we look at English nominals, we can find some support<sup>24</sup> for the top-rank of SingPart&\*Non-Spec<sub>N</sub>/Pronoun in this language. Notice that the phrases ??*the arrival of them*, ??*the departure of you* or ??*the emergence of it* are decisively worse than their equivalents with prenominal possessors which carry the role of Patient/Theme, i.e. *their arrival*, *your departure*, and *its emergence*. The full acceptability of the nominal *the death of me* is exceptional. However, this phrase can be treated as an idiomatic expression (cf. *It'll be the death of me*).

In the case of non-pronominal single participant eventualities, the Patient (or Theme) argument is preferably expressed as the Saxon genitive. However, the post-head realization is also available, cf. *your sister's fainting* and *the fainting of your sister*, or *the arrival of the Prime Minister* and *the Prime Minister's arrival*. This is due to the interaction of SingPart and \*Spec<sub>N</sub>/Patient in English with some constraints referring to the complexity of the Possessor noun phrase (which will be discussed briefly in the section to follow).

## 5.5. Extensions of the analysis

This chapter has been focused so far on the investigation of constraints which result from the harmonic alignment of prominence scales. Admittedly, there are several aspects of the analysis of argument linking in event nominals which have not received adequate atten-

<sup>24</sup> Observe that one conjunct, i.e. the constraint \*Non-Spec<sub>N</sub>/Pronoun on its own, would not be sufficient to predict the ill-formedness of \**the fainting of you*. It is not ranked high in English. For instance, it cannot eliminate the phrase *the killing of them*, where the pronominal Patient argument is realized as the *of*-phrase.

tion. Some of them will be identified, and briefly commented upon below.

### 5.5.1. The internal complexity of English DPs in the Specifier position

An important factor which influences the distribution of *'s* genitives and *of*-genitives in English is the internal complexity (i.e. "heaviness") of possessor noun phrases.

As noted in, among others, Quirk et al. (1985), Huddleston (1984), Hawkins (1981), Anschutz (1997), and Taylor (1996), *'s* genitives are avoided when the possessor nominal is syntactically complex (especially right-branching). Although examples such as in (77a) can be heard, they are rare. Possessors with non-defining relative clauses are generally excluded or marginal in the prenominal position (as in 77b). Recursive *'s* genitives are also infrequent, although in principle possible (cf. 77c). The presence of some modification on the possessee nominal (as in 77d) diminishes the acceptability of the prenominal possessive construction:

- (77) a. the people who live across the road's new car  
       b. ??our neighbours who moved in last week's car  
       c. John's wife's mother's friend's baby  
       d. ?John's book on the table (ex. a-d from Taylor 1996: 110-111)  
       e. the man I was talking to's country house (from Taylor 1989: 664)

Noun phrases containing postmodifying PPs occasionally occur as prenominal possessors, as is shown in (78). Notice that the examples in (78b-d) can be, in fact, recognized as containing compound nouns:

- (78) a. the girl with the snake skin's name (cited as an attested example in Babyonyshev 1997: 209)  
       b. the Union of the Democratic Mineworkers' president (from Jucker 1993)  
       c. the teacher of music's wife  
       d. the Queen of England's arrival

The constraint \*Non-Spec<sub>N</sub>/Pro(noun), employed in the present chapter, is the only constraint which can be viewed as reflecting the tendency for *'s* genitives to be less complex syntactically than *of*-genitives. The con-

straint in question penalizes pronominal arguments in the Non-Specifier (i.e. post-head) position in noun phrases, such as *\*the sister of them*, or *\*the intervention of you*.

No constraint was posited above to predict the unacceptability, or marginal acceptability, of phrases with complex possessors in the pre-head position, e.g. *\*my brother who lives in Canada's arrival*, *??the man I hate's son*, or *?the woman in a red dress's arrival*. The simplest way to ban such noun phrases might be the postulation of a hypothetical constraint "Do not have complex DPs in the Specifier of (the higher) DP". Such a constraint could be labelled *\*Complex-Spec<sub>N</sub>* ("No complex specifiers of DP"). If *\*Complex-Spec<sub>N</sub>* were ranked above constraints which call for the specifier position to be filled in noun phrases (e.g. *\*Complex-Spec<sub>N</sub>* >> *SingPart*, and *\*Complex Spec<sub>N</sub>* >> *\*NonSpec<sub>N</sub>/Human*), the ill-formedness of *\*my brother who lives in Canada's arrival* would be predicted.

However, it is more likely that different degrees of complexity of possessor DPs should be recognized<sup>25</sup>. Furthermore, a whole family of constraints should be posited, informally stated as "Do not have a Prepositional Phrase modifying the possessor noun", "Do not have a relative clause modifying the possessor noun", "Do not have a Saxon genitive premodifying the possessor noun". By assigning a different rank to each of those constraints, we would attempt to mirror distinctions in the acceptability of the phrases *the Prime Minister's arrival*, *the Prime Minister's son's arrival*, *?the woman in a red dress's arrival*, *??the man I hate's son*, and *\*my brother who lives in Canada's arrival*.

Quirk et al. (1985) observe that in colloquial speech one can hear possessive genitives which exhibit considerable internal complexity, yet in written English these are usually replaced by post-head *of*-genitives, e.g. *??a man I know's son*, *??the girl you love's photograph*, *?\*the lady I met in the shop's hat*. Consequently, the ranking of the individual constraints with such complex possessor noun phrases could vary depending on the formality of the style. Here we will not attempt to present in detail how such a re-ranking of constraints could be done. However, in the next section we will look at a simpler case of style-dependent differences in constraint ranking in Polish.

<sup>25</sup> See for instance Wasow (2002) for more discussion of the scale of NP complexity.

### 5.5.2. Stylistic variation

When discussing “quasi-passive nominals”, such as *jego ulepszanie* ‘the improving of it/him’ in Chapter 1 and Chapter 4, we remarked that they are characteristic of careful Polish, both in the written and spoken form. The evaluation of the rival candidates, i.e. *ich wspomnianie* ‘their remembering’ and *wspominanie ich* ‘remembering them.Gen’, is illustrated in (79) for this stylistic variety of Polish.

(79) Constraint evaluation in careful Polish

Input: N *wspominanie* ‘recollecting, mentioning’ argument 1: Experiencer/implicit; argument 2: X/Neutral/3Pl

|                             | *Local/Neutral<br>&*Spec <sub>N</sub> /<br>Neutral | *Non-<br>Spec <sub>N</sub> /<br>Pronoun | *Spec <sub>N</sub> /<br>Neutral | *Non-<br>Spec <sub>N</sub> /X |
|-----------------------------|----------------------------------------------------|-----------------------------------------|---------------------------------|-------------------------------|
| a. <i>wspominanie ich</i>   |                                                    | *!                                      |                                 | *                             |
| ☺ b. <i>ich wspomnianie</i> |                                                    |                                         | *                               |                               |

“Quasi-passive nominals” are not attested in the less formal varieties of spoken or written Polish. Instead of the phrases *jej pielęgnowanie* ‘her nursing (i.e. her being nursed)’, *jego ulepszanie* ‘his/its improving (i.e. it/him being improved)’ or *ich wspomnianie* ‘their remembering (i.e. their being remembered)’, speakers use the nominals with post-head object pronouns in colloquial Polish, i.e. *pielęgnowanie jej* ‘nursing her.Gen’, *ulepszanie go* ‘improving him/it’, and *wspominanie ich* ‘remembering them’. The avoidance of “quasi-passive nominals” in colloquial Polish has a functional basis since it removes undesirable ambiguity. The post-head genitive pronoun is unambiguously interpreted as the undergoer (with the role of Patient or Neutral).

A question should be posed now how the preference for the “active” variants of verbal nominals can be predicted in the Optimality-theoretic model, given the set of constraints that have been employed so far. A possible solution is to assume that selected constraints may have a different rank in colloquial and in formal Polish. As is shown in (80) below, \*Spec<sub>N</sub>/Neutral needs to be promoted in colloquial Polish, in comparison to its rank in careful Polish, illustrated in (79). This constraint disallows objective possessives with the semantic role of Neutral (i.e. unaffected Themes). \*Non-Spec<sub>N</sub>/Pronoun, in turn, needs to be demoted in collo-

quial Polish, to allow pronominal arguments to be expressed as post-head genitives.

(80) Constraint evaluation in colloquial Polish

Input: N *wspominanie* 'recollecting, mentioning' argument 1: Experiencer/implicit; argument 2: X/Neutral/3Pl

|                             | *Spec <sub>N</sub> /Neutral | *Non-Spec <sub>N</sub> /<br>Pronoun | *Non-Spec <sub>N</sub> /X |
|-----------------------------|-----------------------------|-------------------------------------|---------------------------|
| ☺ a. <i>wspominanie ich</i> |                             | *                                   | *                         |
| b. <i>ich wspominanie</i>   | *!                          |                                     |                           |

Another constraint which needs to be promoted in colloquial Polish is one which prohibits possessives with the role of Patient, i.e. \*Spec<sub>N</sub>/Patient. If it dominates \*Non-Spec<sub>N</sub>/Pronoun, the candidate (a) in (81), i.e. *ulepszanie ich* 'improving them', wins over its rival, i.e. *ich ulepszanie* 'their improvement', no matter whether the pronominal argument with the role of Patient is prespecified as being discourse-prominent or not.

(81) Constraint evaluation in colloquial Polish

Input: N *ulepszanie* 'improving' argument 1: Agent/implicit; argument 2: X/Patient/3Pl

|                            | *Spec <sub>N</sub> /<br>Neutral | *Spec <sub>N</sub> /<br>Patient | *Non-Spec <sub>N</sub> /<br>Pronoun | *Non-Spec <sub>N</sub> /X |
|----------------------------|---------------------------------|---------------------------------|-------------------------------------|---------------------------|
| ☺ a. <i>ulepszanie ich</i> |                                 |                                 | *                                   | *                         |
| b. <i>ich ulepszanie</i>   |                                 | *!                              |                                     |                           |

\*Spec<sub>N</sub>/Patient can be violated in colloquial Polish in single-participant eventualities, since the phrase *\*zniknięcie mnie* 'disappearance me.Gen' is much worse than *moje zniknięcie* 'my disappearance'<sup>26</sup>.

<sup>26</sup> Some speakers of Polish apparently re-rank \*Spec<sub>N</sub>/Patient above SingPart & \*Non-Spec<sub>N</sub>/Pronoun. This is implied by the following examples from the Internet searches: *zniknięcie go z internetu na tydzień* 'the disappearance of it from the Internet for a week' ([http://www.medianews.com.pl/info\\_media1273.php3](http://www.medianews.com.pl/info_media1273.php3); 27 September, 2004), or *przybycie go do Iraku* 'arrival of him in Iraq' (<http://hubi29.webpark.pl/droga.htm>; 27 September 2004).

- (82) Constraint evaluation in colloquial Polish (compare with 76)  
 Input: N *zniknięcie* 'disappearance' argument 1: X/Patient/1Sg

|                                    | SingPart&<br>*Non-Spec <sub>N</sub> /<br>Pronoun | *Local/Patient<br>&*Spec <sub>N</sub> /<br>Patient | *Spec <sub>N</sub> /<br>Patient | *Non-Spec <sub>N</sub> /<br>Pronoun |
|------------------------------------|--------------------------------------------------|----------------------------------------------------|---------------------------------|-------------------------------------|
| a. <i>zniknięcie</i> mnie          | *!                                               |                                                    |                                 | *                                   |
| ☺ b. <i>moje</i> <i>zniknięcie</i> |                                                  | *                                                  | *                               |                                     |

In (83) and (84) below we juxtapose the rankings proposed for the constraints employed in this section in formal (literary) Polish and colloquial Polish.

- (83) The ranking of selected constraints in careful Polish:  
 SingPart&\*Non-Spec<sub>N</sub>/Pronoun >> {\*Local/Neutral&\*Spec<sub>N</sub>/Neutral; \*Local/Patient&\*Spec<sub>N</sub>/Patient} >> \*Spec<sub>N</sub>/x >> \*Non-Spec<sub>N</sub>/Pronoun >> \*Spec<sub>N</sub>/Neutral >> {\*Non-Spec<sub>N</sub>/X, \*Spec<sub>N</sub>/Patient}
- (84) The ranking of selected constraints in colloquial Polish:  
 SingPart&\*Non-Spec<sub>N</sub>/Pronoun >> {\*Local/Neutral&\*Spec<sub>N</sub>/Neutral; \*Local/Patient&\*Spec<sub>N</sub>/Patient} >> {\*Spec<sub>N</sub>/x, \*Spec<sub>N</sub>/Neutral, \*Spec<sub>N</sub>/Patient}<sup>27</sup> >> \*Non-Spec<sub>N</sub>/Pronoun >> \*Non-Spec<sub>N</sub>/X

Positing different constraint rankings for less formal and more formal styles of Polish means effectively that stylistic varieties of a given language have slightly distinct grammars.

Stylistic variation which depends on the level of formality, or the occurrence of the written or spoken mode, has been investigated by authors who adopt various non-generative approaches, including the framework of functional grammar. Stylistic variation in English is studied in, for instance, Halliday (1970) and Biber (1988). For a recent bibliography of articles and monographs which investigate the stylistic varieties of Polish, one can consult, for instance, Wilkoń (2000).

When postulating a generative account of English phonology, Chomsky and Halle (1968) assert that stylistic differences, e.g. those depending on the tempo of the utterance, are part of the perfor-

<sup>27</sup> Although it is clear that \*Spec<sub>N</sub>/Neutral dominates \*Spec<sub>N</sub>/Patient in colloquial Polish (as follows from the language-universal constraint subhierarchies given in 34), the braces used here indicate that \*Spec<sub>N</sub>/Neutral and \*Spec<sub>N</sub>/Patient are regarded as unranked with respect to \*Spec<sub>N</sub>/x. It is difficult to find evidence whether \*Spec<sub>N</sub>/x dominates or is dominated by \*Spec<sub>N</sub>/Neutral and \*Spec<sub>N</sub>/Patient, since the three constraints usually act in unison.

mance, not competence, hence they are not rule governed. An opposite claim was advanced as early as in 1974 in a generative study of French phonology. When discussing French liaison, Selkirk (1974) posits different grammars for three styles. She argues that differences between styles of speaking in French should be treated as rule-governed. Recently more interest has been shown in dialectal and stylistic variation by linguists who espouse the generative framework<sup>28</sup> (see, for instance, Barbiers et al. 2002, or Boersma and Hayes 2001).

### 5.5.3. The split between Polish verbal nominals and deverbal nominals

It was mentioned in Chapter 1 (section 1.1.) that event nominals in Polish belong to two classes, i.e. verbal nominals and deverbal nominals. The so-called verbal nominals are headed by nouns terminating in the highly productive *-nie/-cie* suffix. The heads of the so-called deverbal nominals are nouns derived by means of less productive suffixes, e.g. *-ka, -cja, -anina*. In this study we were interested mainly in the argument linking within verbal nominals, since object-type pronominal arguments in such nominals can occur either as possessive pronouns/adjectives or as adnominal genitives.

In the case of deverbal nominals, normative grammars of Polish prohibit the use of such arguments as adnominal genitives, e.g. (\*) *dyskryminacja was* 'discrimination you.PlGen'. Since such phrases are heard in colloquial Polish, they are preceded by (\*) in (85) below:

- (85) a. *utrącenie* was  
       losing       you.PlGen  
      b. (\*)*utrata* was  
       loss        you.PlGen  
      c. *bronienie* nas       przec       wrogiem  
       defending us.Gen   against   enemy  
      d. (\*)*obrona* nas       przec       wrogiem  
       defense    us.Gen   against   enemy

Here the Polish data differ from similar examples provided in Chapter 1 from Czech from Comrie (1976), and repeated for convenience below.

<sup>28</sup> A generative study of stylistic rules is also offered in Bobrowski (1993), who investigates marked word orders in Polish noun phrases.

- (86) a. *tvá ztráta* 'your loss' (SubjPoss)  
 b. *ztráta tebe* '(someone's) loss of you' (ObjGen)

Thus, in literary (i.e. careful) Polish, deverbal nominals pattern together with intransitive verbal nominals (cf. *\*skakanie was* 'jumping you.PIGen'), psych-nominals (*\*zdumienie was* 'astonishment you.PIGen') and with referential nominals (*\*matka was* 'mother you.PIGen'). In neither type of those nominals can the pronominal argument surface as the post-head object pronoun.

A potential way of accounting for this pattern would be to analyze Polish deverbal nominals – i.e. nominals headed by nouns terminating in less productive suffixes – as single-argument nominals. The local conjunction of the constraints SingPart & \*Non-Spec<sub>N</sub>/Pronoun would then predict the ungrammaticality of the phrase (*\*)dyskryminacja was* 'discrimination you.PIGen' in careful Polish. There are, however, undesirable consequences of such a solution. Notice that deverbal nominals in Polish can be accompanied by agentive *przez*-phrases and agentive modifiers, which can be interpreted as a sign of the presence of implicit Agents, e.g. *planowa wymiana instalacji gazowej przez spółdzielnię mieszkaniową* 'the scheduled exchange of gas installation by the housing cooperative'.

Another possible solution is to make relativized OT constraints apply to selected types of nominals only. In some phonological studies couched within the OT framework, for instance in Fukazawa, Kitahara and Ota (1998), faithfulness constraints are marked to apply to different lexical strata in the lexicon, e.g. to native vocabulary, or unasimilated foreign words<sup>29</sup>. We propose that the constraint \*Non-Spec<sub>N</sub>/Pronoun can be split into two constraints. One of them, i.e. \*Non-Spec<sub>N</sub>/Pronoun<sub>Sdev</sub>, is active in the case of deverbal nouns with less productive suffixes (referred to as *substantiva deverbalia* in Puzynina 1969 and abbreviated here as Sdev). In careful Polish, it has to dominate other constraints, e.g. \*Spec<sub>N</sub>/x and \*Spec<sub>N</sub>/Patient, in order to prevent the linearization patterns with post-head object pronouns, such as *\*dyskryminacja was* 'discrimination you.PIGen'. The other constraint, i.e. \*Non-Spec<sub>N</sub>/Pronoun<sub>Sverb</sub>, is made to apply to verbal nouns (Sverb), which contain the suffix *-nie/-cie*. It has a lower ranking. Only when lo-

<sup>29</sup> In a similar vein, Cetnarowska and Zygis (2004) postulate a family of constraints which align the right edge of a prefix with the right edge of a syllable in Polish. They include AlignR<sub>COMP</sub> and AlignP<sub>TRA</sub>, which are marked to apply to compounds, or to transparent derivatives. These constraints are inactive when they encounter non-transparent derivatives.



cally conjoined with SingPart is it able to dominate  $*\text{Spec}_N/x$ ,  $*\text{Spec}_N/\text{Patient}$ , as well as the high-ranked locally conjoined constraint  $*\text{Local}/\text{Patient} \& * \text{Spec}_N/\text{Patient}$ . This can be shown for the constraint evaluation of the candidates *moje zniknięcie* 'my disappearance' and *\*zniknięcie mnie* 'disappearance me.Gen' in tableau (76) above.

In colloquial Polish, there seems to be no need to split  $*\text{Non-Spec}_N/\text{Pronoun}$  into  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Sverb}}$  and  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Sdev}}$  since both (85a) and (85b) are acceptable. Yet, in order to have a similar set of constraints applying in both varieties of Polish, it may be better to assume that colloquial Polish does employ  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Sdev}}$  and  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Sverb}}$ . These constraints have the same rank in colloquial Polish, hence there is no difference in the evaluation of *utrącenie was* 'losing you.PI' and *utrata was* 'the loss of you.PI'.

Notice, furthermore, that in colloquial Polish there is a contrast between the nominals given in (87) and (88) below.

(87) Judgments for colloquial Polish (from Cetnarowska 1998c)

- a. wymiana was na szpiegów rosyjskich (przez KGB)  
exchange you.PIGen for spies Russian.Adj (by KGB)
- b. wymiana go na nowy model  
exchange it/him.Gen on new model  
'its exchange for a new model'
- c. eliminacja go z drużyny  
eliminating him.Gen from team  
'his exclusion from the team'

- (88) a. \*zwrot go rodzicom  
return him/it.Gen parents.Dat  
'the return of it/him to (the) parents'
- b. \*odczyt go w następnym miesiącu  
reading it/him.Gen in next month  
'the reading of it (e.g. the reading of a gas meter) next month'

If a deverbal process nominal is headed by a deverbal noun terminating in a phonologically null suffix  $-\emptyset_{\text{masc}}$ <sup>30</sup>, e.g. *zwrot* 'return', or *odczyt* 'reading', the internal argument cannot surface as an object pronoun (cf. Franks and King 2000). The nominals in (88) are ill-formed both in colloquial and literary variety of Polish.

<sup>30</sup> It is necessary to specify the suffix as deriving masculine gender nouns, since zero-derived feminine gender nouns, such as *wymiana* 'exchange' in (87a, b) can be followed by object pronouns. Notice that the word-final vowel *-a* in *wymiana* 'exchange' is the inflectional ending.

In order to predict the difference between *eliminacja go* 'elimination of him' and *\*zwrot go rodzicom* 'return of him to (his) parents', we can postulate a high-ranked constraint  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Somasc}}$ . It will apply only to nominals headed by suffixless (i.e. zero-derived) masculine nouns<sup>31</sup>. It will be inactive when it encounters a suffixed head in a deverbal nominal, e.g. *eliminacja go* 'elimination of him'.

In the case of colloquial Polish,  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Somasc}}$  will be ranked higher than  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Sdev}}$  and  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Sverb}}$ . In literary Polish, on the other hand,  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Somasc}}$  and  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Sdev}}$  have the same rank and they dominate the constraint  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Sverb}}$ . Such rankings predict the difference in the judgments of nominals in (85) and (87–88).

A question could be asked whether the locally conjoined constraint  $\text{SingPart}\&*\text{Non-Spec}_N/\text{Pronoun}$ , which has been recognized in previous sections as being top-ranked both in colloquial and literary Polish, should now be replaced by a family of constraints, i.e.  $\text{SingPart}\&*\text{Non-Spec}_N/\text{Pronoun}_{\text{Somasc}}$ ,  $\text{SingPart}\&*\text{Non-Spec}_N/\text{Pronoun}_{\text{Sdev}}$ ,  $\text{SingPart}\&*\text{Non-Spec}_N/\text{Pronoun}_{\text{Sverb}}$ . Although this would be in principle possible, we think it would not be desirable to postulate such three locally conjoined constraints since they would all have the same rank. The pronominal argument of a single-participant nominal is realized as a prenominal possessor no matter whether the head is a deverbal suffixed noun, deverbal zero-derived (masculine) noun, or a verbal noun. Compare, in this respect, *twój przyjazd* 'your arrival' and *twoje zniknięcie* 'your disappearance'. Therefore, it seems more appropriate to retain the constraint  $\text{SingPart}\&*\text{Non-Spec}_N/\text{Pronoun}$ . One of its conjuncts, i.e.  $*\text{Non-Spec}_N/\text{Pronoun}$ , will be assumed to have the same rank<sup>32</sup> as the weakest of the more specific constraints which belong to the same family. In careful (literary) Polish,  $*\text{Non-Spec}_N/\text{Pronoun}$  will have the same rank as  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Sverb}}$  whereas in colloquial Polish it will be ranked together with  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Sdev}}$  and  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Sverb}}$ . In (89) and (90) below we propose a revision of the rankings given earlier in (83) and (84) in order to incorporate the existence of constraints which apply to selected types of nominals.

<sup>31</sup> Since suffixless masculine deverbal nouns belong to the group of *substantiva deverbalia*, the constraint  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Sdev}}$  will be activated when it encounters the nominal *\*zwrot go* 'return of him/it'. Therefore, the nominal in question will involve the violation of both  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Somasc}}$  and  $*\text{Non-Spec}_N/\text{Pronoun}_{\text{Sdev}}$ .

<sup>32</sup> This is a simplification. Actually, the more general constraint cannot be ranked above the more specific constraint.

- (89) The ranking of selected constraints in careful Polish:

SingPart&\*Non-Spec<sub>N</sub>/Pronoun >> {\*Local/Neutral&\*Spec<sub>N</sub>/Neutral;  
 \*Local/Patient&\*Spec<sub>N</sub>/Patient} >> {\*Non-Spec<sub>N</sub>/Pronoun<sub>Semasc</sub>;  
 \*Non-Spec<sub>N</sub>/Pronoun<sub>Sdev</sub>} >> \*Spec<sub>N</sub>/x >> {\*Non-Spec<sub>N</sub>/Pronoun<sub>Sverb</sub>;  
 \*Non-Spec<sub>N</sub>/Pronoun} >> \*Spec<sub>N</sub>/Neutral >> {\*Non-Spec<sub>N</sub>/X, \*Spec<sub>N</sub>/Patient}

- (90) The ranking of selected constraints in colloquial Polish:

SingPart&\*Non-Spec<sub>N</sub>/Pronoun >> {\*Local/Neutral&\*Spec<sub>N</sub>/Neutral;  
 \*Local/Patient&\*Spec<sub>N</sub>/Patient} >> \*Non-Spec<sub>N</sub>/Pronoun<sub>Semasc</sub> >> {\*Spec<sub>N</sub>/x,  
 \*Spec<sub>N</sub>/Neutral, \*Spec<sub>N</sub>/Patient} >> {\*Non-Spec<sub>N</sub>/Pronoun<sub>Sdev</sub>;  
 Pronoun<sub>Sverb</sub>;  
 \*Non-Spec<sub>N</sub>/Pronoun} >> \*Non-Spec<sub>N</sub>/X

## 5.6. Summary

Let us close this chapter with a brief summary.

Building upon the analysis of argument linking proposed in Aissen (1999) for clausal structures and in Aissen (2002) for referential (material) nouns, we have presented an outline of an analysis which attempts to account for argument linking in “genuine passive nominals” and “quasi-passive nominals” in English and Polish. The analysis is couched within the framework of Optimality Theory and employs the mechanism of harmonic alignment of prominence scales. The set of the prominence scales which are particularly important for the analysis includes the Nominal Scale (i.e. Spec<sub>N</sub> > Non-Spec<sub>N</sub>), the Thematic Hierarchy, the Discourse Prominence Scale (i.e. X > x), the Animacy Scale (Human > Non-human) and the Person Scale (Local > 3<sup>rd</sup>). We have shown that we can restate restrictions on prenominal possessives, e.g. the Affectedness Constraint, by means of constraints which are derived by aligning the elements from two or more scales, e.g. \*Spec<sub>N</sub>/Neutral and \*Non-Spec<sub>N</sub>/Pronoun. These constraints evaluate candidates (i.e. alternative linearization patterns) for a particular input, i.e. for a given (de)verbal noun with a set of its arguments. We have adopted the idea (suggested in Legendre et al. 1993, and in Aissen 1999) that arguments are pre-specified in the input as being non-prominent or as having high discourse prominence (when they function as topics). We have also assumed that the choice between the postnominal and the prenominal location of the object-type argument in a nominal depends on

the topic-focus articulation within a noun phrase. To be more specific, arguments which are pre-specified as topics (i.e. discourse-prominent ones) must be expressed as prenominal possessives. Arguments which are not topics are expressed in the post-head position, i.e. as *of*-phrases in English, or adnominal genitives in Polish. It was shown that in English the constraint  $*\text{Non-Spec}_N/X$  must be crucially interpolated between two constraints from the universal constraint subhierarchy, i.e.  $*\text{Spec}_N/\text{Neutral}$  and  $*\text{Spec}_N/\text{Patient}$  (while the constraint  $*\text{Spec}_N/x$  must be ranked above them). Evidence was given to justify the use of the locally conjoined constraints, e.g.  $*\text{Local}/\text{Patient} \& * \text{Spec}_N/\text{Patient}$ , the violation of which is more fatal than the violation of each of the conjuncts independently.

Employing the insights from the study of passive nominals in Doron and Rappaport-Hovav (1991) and Trugman and Cetnarowska (2001), we have assumed that “genuine passive nominals” and “quasi-passive nominals” have different inputs. “Genuine passive nominals” are single-participant (i.e. single-argument) eventualities, e.g. the English nominals *the city's destruction*, *Jack's murder*, or the Polish nominals *moje odwołanie* ‘my being dismissed (from a given position)’, and *wasze aresztowanie* ‘your arrest’. “Quasi-passive nominals” denote two-participant (i.e. two-argument) eventualities. Apart from the object-type argument (with the role of Neutral or Patient), such nominals contain a syntactically non-inert, though implicit, subject-type (i.e. Agent, or Experiencer) argument. The latter argument can be optionally expressed by the *by*-phrase. We have suggested that the constraint evaluation proceeds slightly differently in “genuine passive nominals” and in “quasi-passive nominals” due to the influence of the locally conjoined constraint  $\text{SingPart} \& * \text{Non-Spec}_N/\text{Pronoun}$ , which forces the pronominal single argument to be realized preminally.

We have shown that the differences between the restrictions on possessives in two or more languages can be translated into language-particular rankings of universal constraints (including locally conjoined ones). For instance, the constraint  $*\text{Local}/\text{Patient} \& * \text{Spec}_N/\text{Patient}$  (which penalizes first and second person possessive pronouns from denoting patients) is top-ranked in Polish (dominated only by  $*\text{SingPart} \& * \text{Non-Spec}_N/\text{Pronoun}$ ). The same locally conjoined constraint seems to have no effect on candidate evaluation in English, hence it must be low-ranked there. Another locally conjoined constraint, i.e.  $*\text{Hum}/\text{Neutral} \& * \text{Spec}_N/\text{Neutral}$ , plays a significant role in English, but has a low rank in Polish, Italian, or Spanish.

In (91) below we provide, for convenience, a list of the relevant constraints proposed for English nominals<sup>33</sup>:

- (91) The ranking of selected constraints in English:  
 {SingPart&\*Non-Spec<sub>N</sub>/Pronoun; \*Hum/Neutral&\*Spec<sub>N</sub>/Neutral} >> \*Spec<sub>N</sub>/x >> \*Non-Spec<sub>N</sub>/Pronoun >> \*Spec<sub>N</sub>/Neutral >> \*Non-Spec<sub>N</sub>/PN >> \*Spec<sub>N</sub>/Inanimate >> \*Non-Spec<sub>N</sub>/X >> \*Spec<sub>N</sub>/Patient

The list above does not include a constraint banning complex possessors, since – as was suggested in section 5.5.1. – there arises a need for a whole family of them (to penalize various degrees of the internal complexity of the English possessor noun phrases).

With reference to Polish, we have proposed that grammars of two stylistic varieties (i.e. careful Polish and colloquial Polish) may differ in the ranking of particular constraints, e.g. \*Spec<sub>N</sub>/Neutral and \*Spec<sub>N</sub>/Patient.

In (92) and (93) below we repeat the constraint rankings given in section 5.5.2. for careful (literary) Polish and for colloquial Polish.

- (92) The ranking of selected constraints in careful Polish:  
 SingPart&\*Non-Spec<sub>N</sub>/Pronoun >> {\*Local/Neutral&\*Spec<sub>N</sub>/Neutral; \*Local/Patient&\*Spec<sub>N</sub>/Patient} >> \*Spec<sub>N</sub>/x >> \*Non-Spec<sub>N</sub>/Pronoun >> \*Spec<sub>N</sub>/Neutral >> {\*Non-Spec<sub>N</sub>/X, \*Spec<sub>N</sub>/Patient}
- (93) The ranking of selected constraints in colloquial Polish:  
 SingPart&\*Non-Spec<sub>N</sub>/Pronoun >> {\*Local/Neutral&\*Spec<sub>N</sub>/Neutral; \*Local/Patient&\*Spec<sub>N</sub>/Patient} >> {\*Spec<sub>N</sub>/x, \*Spec<sub>N</sub>/Neutral, \*Spec<sub>N</sub>/Patient} >> \*Non-Spec<sub>N</sub>/Pronoun >> \*Non-Spec<sub>N</sub>/X

We have also suggested (in section 5.5.3.) that OT constraints may be made sensitive to particular types of vocabulary, in order to distinguish between several types of nouns in Polish, i.e. verbal nouns, suffixed deverbal nouns, and masculine gender suffixless deverbal nouns. If this is the case, the constraint \*Non-Spec<sub>N</sub>/Pronoun needs to be split into \*Non-Spec<sub>N</sub>/Pronoun<sub>S<sub>0</sub>masc</sub>, \*Non-Spec<sub>N</sub>/Pronoun<sub>S<sub>0</sub>dev</sub> and \*Non-Spec<sub>N</sub>/Pronoun<sub>S<sub>0</sub>verb</sub>. This proposal calls for a further revision of constraint rankings, as is suggested in (89) and (90) above. However, in the next chapter we will refer to only one subtype of event nominals in Polish, namely

<sup>33</sup> This is based on the constraint ranking given in (63). The constraint SingPart&\*Non-Spec<sub>N</sub>/Pronoun, introduced in section 5.4.7., is treated above as having the same rank as \*Hum/Neutral&\*Spec<sub>N</sub>/Neutral in English, since no evidence was considered for one of them to dominate the other.

verbal nominals (headed by nouns terminating in *-nie/-cie*). Therefore, it will be convenient to use the constraint rankings in the form given in (92–93).

In Chapter 6 we will focus on the prosodic conditioning of structural realization of pronominal arguments in Polish verbal nominals. We will attempt to model the interaction between syntactic and prosodic constraints in Optimality Theory.

## CHAPTER 6

# Syntax-prosody interaction in Polish “quasi-passive nominals”

### 6.1. Introduction

In Chapter 5 it was proposed that the interaction of syntactic (or semantico-syntactic) constraints determines the selection of the argument expressed as a prenominal possessive in Polish and English event nominals. These constraints made reference to, among others, animacy or thematic roles borne by arguments and to the information structure within noun phrases.

The issue which received no attention in the previous chapter was the influence of prosody on the realization of the pronominal arguments. Such influence can be detected in Polish “quasi-passive nominals”, e.g. *ich przeprowadzenie* ‘the carrying out of them’, as will be shown in section 6.2. In section 6.3. we will consider advantages and disadvantages of the hypothesis of Prosodic Inversion in Polish noun phrases, put forward within a derivational model of generative grammar in Cetna-rowska (1999b). In section 6.4. introductory comments will be offered on the syntax-phonology interaction in Optimality Theory. Then, in section 6.5., a revision will be proposed of the constraint hierarchy postulated in Chapter 5 for Polish nominals, in order to allow for the influence of prosodic factors on the selection of the most felicitous linearization pattern in Polish “quasi-passive nominals”.

## 6.2. The influence of prosodic factors on selecting linearization patterns of Polish event nominals

As observed in Cetnarowska (1996, 1999a, b, 2001a), the sentence-final position is the most frequent position in which Polish nominals with object possessives occur (especially the “quasi-passive nominals”). Illustrative examples, taken from the Polish daily newspaper *Gazeta Wyborcza*, are given in (1) below. As is shown in (1c), what matters is not so much the syntactic factor (i.e. the sentence-final position) as the prosodic factor (i.e. the pre-pausal position).

- (1) a. Wydają listy wzywające do jego poparcia. (GW)  
 ‘They are sending letters (to the press) in an effort to widen support for him (lit. for his supporting)’.
- b. Wiele szczepień wykonuje się rok, dwa lata później, albo rezygnuje się z ich przeprowadzenia. (GW)  
 ‘Many vaccinations are carried out a year or two years later, or one neglects to carry them out (lit. from their carrying out)’.
- c. Mamy tylu klientów, że nie nadążamy z ich przyjmowaniem – opowiada jeden z urzędników SOMO [SOMO = organizacja ds. sprzedaży ropy w Iraku]. (GW)  
 ‘We have so many customers that we lag behind dealing with them (lit. with their dealing) – says one of the SOMO officers’.

The use of the alternative syntactic variant, e.g. *?listy wzywające do poparcia go* ‘letters calling for support for him’ (with the post-head genitive pronoun), would be regarded as infelicitous in careful Polish<sup>1</sup>.

We can also observe the tendency to employ object possessives in nominals located sentence-medially but at the end of the Phonological Phrase (PPh). Notice that the locative phrase in (2) constitutes a PPh by itself.

- (2) (...) nie będzie problemów z jego przeprowadzeniem [= zabiegu aborcji] w jednym z prywatnych gabinetów ginekologicznych. (GW)  
 ‘(...) there will be no problems with carrying out an abortion (lit. with its carrying out) in one of private gynaecological surgeries’.

In the immediately following sections we will compare ways in which we can capture the relevance of phonological phrasing for selecting the pre-head or post-head realization of the pronominal argument in two types of theories: in derivational models and in the non-derivational model of Optimality Theory.

<sup>1</sup> Such examples are occasionally attested in written Polish, mainly in excerpts from newspapers.

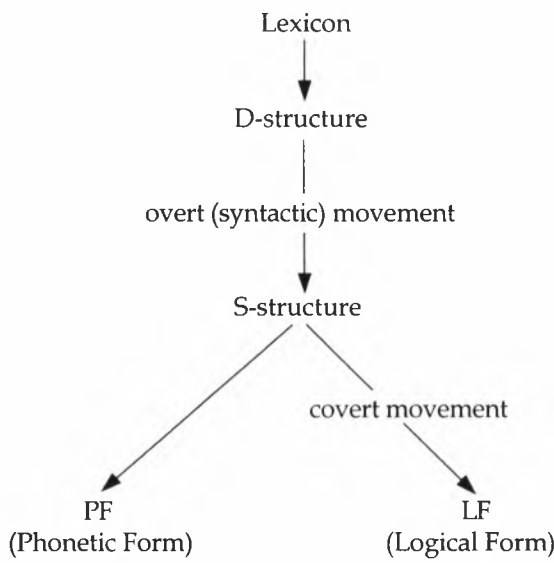


6.3. Syntax-prosody interaction in derivational models:  
Prosodic Inversion

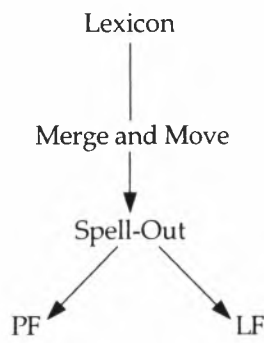
In derivational models of grammar, such as the Principles and Parameters model or the Minimalist Program (outlined in Chomsky 1995), syntax can provide the input to phonology, but not vice versa.

The organization of grammar in the Principles and Parameters Theory and in the Minimalist Program (cf. Chomsky 1995) is shown schematically in diagrams in (3a) and (3b), which are modelled on similar diagrams in Haegeman (1994) and Stalmaszczyk (1998):

(3) a. The Principles and Parameters Theory:



b. The Minimalist Program



The Spell-Out is the point where abstract structures receive an overt form. LF is the abstract representation of meaning while PF is an abstract representation of sounds.

One can capture the influence of a derivationally later component (i.e. phonology) on a derivationally earlier one (i.e. syntax) by postulating post-syntactic (Phonetic Form) movements<sup>2</sup>, which apply after the Spell-Out. Post-syntactic (PF) movements are often referred to as “movement operations of the phonological component”<sup>3</sup>. They have no semantic effect since their output is not visible to LF.

A type of PF movement, referred to as Prosodic Inversion (PrInv), is proposed in Halpern (1995). Halpern assumes that clitics carry subcategorization frames. They specify the kind of phonological host to which they need to attach as well as determine the direction of attachment (i.e. proclisis vs. enclisis), e.g.  $[[ ]_{\omega} cl]_{\omega}$  or  $[[ ]_{pph} cl]_{pph}$ . If rules of syntax place a clitic in a sentence-initial position, this word-order may be changed by Prosodic Inversion. PrInv applies whenever the subcategorization requirements of clitics are not met. It moves a clitic to the left (or right) of its host.

The spirit of Halpern’s Prosodic Inversion is reflected in Cetnarowska’s (1999b) account of the distribution of pronominal elements in Polish nominals. Cetnarowska (1999b) postulates a post-syntactic rule of pronominal object shift in verbal nominals. This rule shifts post-head object pronouns to the pre-head position, as in (4b). Such a proposal follows the remark made in Rozwadowska (1995b), namely the suggestion that some kind of postsyntactic movement of a pronominal object occurs in phrases such as (4b, 4c). Rozwadowska observes that the pre-head pronoun *ich* does not bind the anaphor *swoich* ‘self’s’ in (4c), hence it appears not to be in the position of the “subject of NP”.

- (4) a. rozwiązywanie    ich  
       solving                them.Gen  
    b. ich                rozwiązywanie  
       them/their    solving  
    c. ich<sub>i</sub> odwiezienie do swoich<sub>i/k</sub> rodziców  
       ‘taking them back to self’s parents’

<sup>2</sup> In some approaches (cf. Franks and King 2000, Bošković 2001) it is argued that PF has a “filtering effect” on syntax (i.e. on pre-Spell-Out operations). Franks and King (2000: 340 ff) assume that the output of the syntactic component contains several copies of a given clitic. The selection of the most suitable copy is performed by constraints sensitive to prosodic factors.

<sup>3</sup> See Tajsner (2004) for more discussion of PF rules in the recent version of the minimalist framework.

The advantage of such an analysis is the ability to predict that third person pronouns (i.e. those which have genitive forms identical with their possessive forms) occur much more often than first or second person pronouns in the pre-head position with “objective” interpretation. Also, the rule of Pronominal Object Shift could account for the parallelism observed between verbal and nominal structures, since pronoun preposing could be proposed to derive both (4b) and (5b).

(5) *Te zadania matematyczne były trudne, ale (...) ‘These mathematical problems were difficult but (...)’*

- a. *!Piotr            rozwiązał    je.*  
     Peter.Nom    solved.3SgM   them.AccF/N
- b. *Piotr            je                    rozwiązał.*  
     Peter.Nom    them.AccF/N   solved.3SgM  
     ‘Peter solved them’.

Another advantage of the analysis sketched in Cetnarowska (1999b) (and adopted in Trugman 2000, and Trugman and Cetnarowska 2001) is the ability to distinguish between “genuine passive nominals” and “quasi-passive nominals” in Polish (and Russian). The latter nominals are regarded as containing preposed third person object pronouns, which are generally identical to corresponding possessive pronouns.

Nominals of the former type (i.e. “genuine passive nominals” exemplified in 6), can occur with first and second person objective possessives. Cetnarowska (1999b) assumes that the objective possessives in (6) are base-generated in a position distinct from subjective possessives, namely as complements of  $N^0$ . They move to the configurationally higher pre-head position in the course of their syntactic derivation.

- (6) a. *nasze zdenerwowanie*  
       our    annoyance
- b. *wasze aresztowanie przez miejscową policję*  
     your.Pl arresting    by    local            police  
     ‘your being arrested by the local police’
- c. *twoje zwolnienie z pracy*  
     your.Sg dismissing from work  
     ‘your being dismissed from your job’

The hypothesis of regarding third person objective possessives, such as *jej* in *jej odesłanie* ‘sending her back (lit. her sending-back)’, as genitive pronouns shifted to the pre-head position by a post-syntactic movement faces, however, the following problems.

A noun in Polish cannot be normally preceded by two possessives (as shown in 7 below)<sup>4</sup>:

- (7) a. \**twój*    *mój*    *portret*  
       your.Sg   my    portrait  
       'a portrait of me that belongs to you or that has been painted by you'
- b. \**wasze*    *nasze*    *aresztowanie*  
       your.Pl   our     arresting  
       'your arresting us'
- c. ?\**wasza*    *ich*            *przesyłka*  
       your.Pl    them/their   despatch  
       'your despatching them'
- d. (??) *twoja*    *ich*    *lista* (= *twoja*    *lista*    *gości*)  
       your.Sg    their   list (= your.Sg   list.Nom   guests.Gen)  
       'your list of them (i.e. your list of the guests)'
- e. (??) *moja*    *jego*    *biografia* (= *moja*    *biografia*    *poety*)  
       my            his    biography (= my    biography    poet.Gen)  
       'my biography of him (i.e. my biography of the poet)'
- f. (??) *moja*    *ich*    *interpretacja* (= *moja*    *interpretacja*    *wierszy*)  
       my            their   interpretation (= my    interpretation    poems)  
       'my interpretation of them (= my interpretation of the poems)'

In a highly rhetorical, elevated style, e.g. that of a sermon, one can occasionally find instances of verbal nominals with double possessives, one of them (first or second person) having the subjective reading, the other (i.e. the third person pronoun) exhibiting the objective reading (see 8).

- (8) a. ??*wasze*    *codzienne*    *ich*            *wzbogacanie*  
       your.Pl    daily            them/their   enriching  
       'your enriching them every day'
- b. ??*wasze*    *głębokie*    *jej*            *przeżywanie*  
       your.Pl    deep            her/its        experiencing  
       'your experiencing it in a profound way'
- c. ??*wasze*    *nieustanne*    *ich*            *ulepszanie*  
       your.Pl    incessant    them/their   improving  
       'your improving them incessantly'

The hypothesis of PF movement of object pronouns in event and non-event nominals would, however, predict the full acceptability of the phrases in (8) above.

<sup>4</sup> These phrases become more acceptable once the second possessive is the third person. Gębka-Wolak (2000) provides the example in (7d) and Kiklewicz (1997) mentions the examples in (7e, f). Both authors regard those phrases as fully acceptable. However, many native speakers regard the examples in (7) as marginally acceptable at best (as the phrases in 8).

Moreover, once we postulate Prosodic Inversion of object pronouns in Polish nominals, there is no explanation for the data in (9). (9a) is acceptable since the morphologically reduced (i.e. clitic) pronoun *go* 'him.Gen.cl.' has a phonological host onto which it encliticizes, i.e. the verbal noun *przebadanie* 'examining.Pf'. In (9b) the replacement of the morphologically reduced form by the full form *jego* 'him.Gen.' (which also functions as the possessive pronoun 'his') could, in principle, be construed as triggered by phonological factors. The pronoun occurs post-pausally and there is no preceding phonological host to which it could attach. In contrast, in (9c) the pronoun *go* 'him' has a phonological host available in front of it (i.e. the disyllabic conjunction *ale* 'but' which bears a lexical stress). If we assume that Prosodic Inversion can shift the object pronouns in Polish whenever appropriate phonological conditions are met, we (incorrectly) predict (9c) to be well-formed.

- (9) a. *przebadanie go wczoraj*  
       examining him.Gen yesterday  
       b. *Jego/\*Go przebadanie będzie niemożliwe.*  
           him.Gen/him.Gen examining be.Fut3Sg impossible  
           'It will be impossible to examine him'.  
       c. *Ale \*go przebadanie będzie niemożliwe.*  
           but him.Gen examining be.Fut3Sg impossible  
           'But it will be impossible to examine him'.  
       d. *Ale jego przebadanie będzie niemożliwe. (= 9c)*  
           but his examining be.Fut3Sg impossible

Furthermore, Prosodic Inversion should apply indiscriminately both to post-head weak/clitic genitive pronouns in (10a) as well as to unstressed dative pronouns in (10b). This is not the case, since event nominals with preposed dative pronouns sound less felicitous than those with putative preposed genitive pronouns. Note that unstressed dative pronouns appear to undergo Prosodic Inversion in sentential constructions, as in (10d).

- (10) a. *dzisiejsze ich zbadanie*  
       today.Adj their examining  
       'today's examination of them'  
       b. *??dzisiejsze im oddanie pieniędzy*  
           today.Adj them.Dat returning money.Gen  
           'returning the money to them today'  
       c. *Dziś oddałam im pieniądze.*  
           today returned.1SgF them.Dat money.Acc  
           'Today I returned the money to them'.  
       d. *Dziś im oddałam pieniądze.*  
           today them.Dat returned.1SgF money.Acc

First and second person weak genitive pronouns cannot be felicitously preposed<sup>5</sup> in verbal nominals in Polish (see 11c), though they appear to do so in sentential constructions (in 11b).

- (11) a. !Wczoraj widziałam was.  
           yesterday saw.1SgF you.PlAcc  
       b. Wczoraj was widziałam.  
           yesterday you.PlAcc saw.1SgF  
       c. wczorajsze spotkanie was (w kinie)  
           yesterday.Adj meeting you.PlGen in cinema  
       d. ??wczorajsze was spotkanie  
           yesterday.Adj you.PlGen meeting

Finally, there are some differences in the choice of adjuncts and modifiers with nominals containing pre-head third person object-type pronouns (or object possessives) and the post-head object pronouns. For instance, adverbs are impossible and result adjuncts sound infelicitous in the case of the former type of nominals (as illustrated in 12c, 13b, 14b). Such differences are unexpected if the nominals in (12c, 13b, 14b) are interpreted as derived from the structures with the post-head object pronouns (given in 12b, 13a, 14a) through Prosodic Inversion.

- (12) a. prowadzenie samochodu wolno i ostrożnie (Fisiak et al. 1978: 149)  
           driving car.Gen slowly and carefully  
       b. prowadzenie go wolno i ostrożnie  
           driving it/him.Gen slowly and carefully  
       c. \*jego prowadzenie wolno i ostrożnie  
           its/his driving slowly and carefully  
       d. jego wolne i ostrożne prowadzenie  
           its/his slow and careful driving
- (13) a. pomalowanie ścian/ich na niebiesko  
           painting.Pf walls.Gen/them on blue  
           'painting the walls blue'  
       b. ??ich pomalowanie na niebiesko  
           their painting.Pf on blue
- (14) a. pobicie ich do nieprzytomności  
           beating.Pf them.Gen to unconsciousness  
           'beating them unconscious'  
       b. ??ich pobicie do nieprzytomności  
           their beating.Pf to unconsciousness

<sup>5</sup> The nominal with the pre-head second person pronoun in (11d) could be marginally acceptable only in poetry or rhythmic prose.

Cetnarowska (1999b) postulates the existence of a surface filter which diminishes the acceptability of the output of the PF rule of pronoun movement if it does not conform to the schema in (15):

(15) Possessive – Head Noun – Genitive Complement

(15) represents the unmarked order of constituents in Polish result or simple event nominals, such as *urodziny Piotra* ‘lit. birthday Peter.Gen’ or *nasze zaproszenie* ‘our invitation’. The recognition of syntactic conditions on the PF movement rule is not a desirable outcome, as is argued by, among others, Franks and King (2000), who criticize syntactic conditions on Halpern’s Prosodic Inversion.

To avoid the use of filters on rules, it has been assumed here that the “quasi-passive” verbal nominals, such as *dzisiejsze ich zbadanie* ‘examining them today (lit. today’s their examining)’ in (10a), contain possessive pronouns. It was argued in the previous chapter that the choice between two variants of verbal nominals, i.e. the one with the objective possessive or the one with the genitive (post-head) pronoun as in *zbadanie ich dzisiaj* ‘examining them today’, results from an interplay of Optimality-theoretic constraints.

Such a solution is desirable since it can be employed to account for the occurrence of “quasi-passive nominals” in languages which keep the possessive and genitive forms of third person pronouns distinct. Such a situation obtains in English, where the possessives *its* and *their*, distinct from the corresponding genitive/objective pronoun forms *it* and *them*, occur in such “quasi-passive nominals”, discussed in the previous chapters and illustrated in (16):

- (16) a. its knowledge (cf. the knowledge of it)  
       b. their recollection (cf. the recollection of them)  
       c. its enjoyment (cf. the enjoyment of it)

This is also the case of Czech, where one can contrast *jich* ‘them.Gen’ and *jejich* ‘their’ in the following nominals given in Comrie (1976):

- (17) a. *lěčení jich* ‘lit. cure them.Gen’ (Czech)  
       b. *lěčení jejich* ‘lit. cure their’

Third person possessives in Czech frequently allow the objective reading, as is shown by the data below, quoted after Veselovská (1998) or provided by Sarka Simáčková (p.c.).

- (18) a. *jejich objevení* 'their discovery' (Czech)  
 b. *jejich znicení* 'their destruction'  
 c. *jejich vycištění* 'their (e.g. clothes) cleaning'

Before providing more details of the analysis of syntax-prosody interaction proposed here as an alternative to Prosodic Inversion in Polish noun phrases, we will discuss briefly the ways of capturing the influence of prosody on syntax in the non-derivational constraint-based model of Optimality Theory.

#### 6.4. Syntax-phonology interaction in a non-derivational model of OT

Golston (1995) outlines an Optimality-theoretic model of syntax-prosody interaction which does not involve derivations and does not invoke any PF filters<sup>6</sup>. He proposes that grammar components are ranked with respect to one another, as shown in (19):

- (19) Syntax >> Phonology >> Morphology

Since phonology is outranked by syntax, it evaluates the output of the syntactic component. Prosodic constraints can choose between candidates which are well-formed syntactically. Golston (1995) interprets the sentences in (20a) and (20b) as being equally well-formed syntactically, but differing in their satisfaction of prosodic constraints (such as those which militate against an unfooted syllable utterance-finally). This is represented schematically in tableau (21):

- (20) a. He threw it into the basket.  
 b. \*He threw into the basket it.

(21)

| Candidates                            | SYN(TAX) | PHON(OLOGY) |
|---------------------------------------|----------|-------------|
| a. (He threw it) (into the basket).   |          |             |
| b. (He threw) (into the basket) (it). |          | *!          |

<sup>6</sup> A similar approach is adopted in, among others, Rice (1997).



In other words, Golston proposes that the syntax of English allows the direct object *it* to surface either in front of or following the locative phrase *into the basket*. It is the job of prosodic constraints to select one of those options as more optimal.

Another example from English, considered in Golston (1995), involves the alternative linearization patterns of English noun phrases shown in (22) and (23). All those variants are regarded by him as being well-formed syntactically.

- (22) a. the video of *Macbeth*  
      b. the *Macbeth* video
- (23) a. the video of *The Dead*  
      b. \*the *The Dead* video

(22a) and (22b) are well-formed phonologically. (23b), in turn, fails to satisfy a phonological anti-homophony constraint, which prohibits sequences of homonymous function words (i.e. *\*the the*). In spite of being well-formed syntactically, candidate (23b) is eliminated by phonological constraints, as is shown in the tableau below.

(24)

| Candidates                      | SYN | PHON |
|---------------------------------|-----|------|
| a. the video of <i>The Dead</i> |     |      |
| b. the <i>The Dead</i> video    |     | *!   |

Golston shows that PF filters employed in derivational frameworks are too strong, since they can block a derivation even when there is no alternative available. The illustrative example in (25) comes from German and involves the occurrence of the homophonous function words *daß* ‘that’, *das* ‘this’ and *das* ‘the’ (definite article):

- (25) a. *daß das das Problem ist*  
      that this the problem is  
      ‘that this is the problem’
- b. \**daß Problem das ist das*

If the anti-homophony constraint, exemplified in (24) for English, were regarded as a PF filter, it would block the derivation of (25a) in German, even though the alternative linearization pattern in (25b) is ill-formed. Optimality-theoretic constraints can be violated. (25a) survives in the

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## **Passive Nominalisierungen im Polnischen und Englischen Eine gemäß der Optimierungstheorie durchgeführte Analyse**

### **Zusammenfassung**

In vorliegender Arbeit hat die Verfasserin viele kontroverse Probleme der passiven Nominalisierung vor allem am Beispiel der englischen und polnischen Sprache besprochen. Ein konstitutives Element der Nominalphrase ist ein deverbatives Nomen, und das das Patiens bedeutende Argument wird dagegen durch Possessivadjektiv ausgedrückt (z.B.: *moje uniewinnienie* dt. *mein Freispruch*, eng. *its removal*) oder durch so genannten sächsischen Genitiv in englischen Substantivierungen (z.B.: *the city's destruction by the enemy* – die Vernichtung der Stadt durch den Feind). Untersucht wurden u.a. der Übereinstimmungsgrad von syntaktischer Vertretung der Satzkonstruktionen und Nominalphrasen, syntaktischer Status von possessiven Formen und die aspektische Charakteristik der Verben, von denen passive Nominalisierungen abgeleitet werden. Man hat zwischen den passiven Einargumentnominalisierungen und den pseudopassiven Zweiargumentnominalisierungen unterschieden. Es wurde vorgeschlagen, die beiden Typen der passiven Nominalisierung im Rahmen des nicht derivativen generativen Modells, d.i. des Modells der Optimierungstheorie (eng.: *Optimality Theory*) mit Hilfe des von Judith Aissen entwickelten theoretischen Modells zu beschreiben. Betont wurde die Darstellung des sog. Mechanismus der harmonischen Gegenüberstellung der Elemente von zwei oder mehreren grammatischen Hierarchien, z.B.: Vitalitätshierarchie, Personenhierarchie, Hierarchie der semantischen Rollen und der Skala von strukturellen Positionen innerhalb der Nominalphrase. Man hat das Zusammenwirken von prosodischen und syntaktischen Beschränkungen bei der Auswahl von morphologisch-syntaktischer Realisierung der nominalen Argumente in polnischen Nominalisierungen gezeigt.

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## Nominalizacje bierne w języku polskim i angielskim: analiza w ujęciu teorii optymalności

### Streszczenie

W niniejszej pracy autorka omówiła wiele kontrowersyjnych kwestii dotyczących nominalizacji biernych, głównie na materiale języka angielskiego i języka polskiego. Składnikiem konstytutywnym grupy nominalnej biernej jest rzeczownik dewerbalny, natomiast argument o znaczeniu Pacjensa wyrażony jest przymiotnikiem dzierżawczym (np. *moje uniewinnienie* i ang. *its removal* 'jego usunięcie') lub tzw. dopełniaczem saksońskim w nominalizacjach angielskich (np. *the city's destruction by the enemy* 'zniszczenie miasta przez wroga'). W pracy rozważono m.in. stopień zbieżności pomiędzy reprezentacją składniową konstrukcji zdaniowych i fraz nominalnych, status składniowy form posesywnych oraz charakterystykę aspektualną czasowników, od których są derywowane nominalizacje bierne. Wyróżniono jednoargumentowe nominalizacje bierne właściwe i dwuargumentowe nominalizacje pseudobierne. Zaproponowano opis obu typów nominalizacji biernych w ramach niederywacyjnego modelu generatywnego, tj. modelu teorii optymalności (ang. *Optimality Theory*), przy wykorzystaniu modelu teoretycznego zaproponowanego w pracach Judith Aissen. Duży nacisk położono na przedstawienie tzw. mechanizmu harmonicznego zestawienia elementów z dwóch lub więcej hierarchii gramatycznych, np. hierarchii żywotności, hierarchii osób, hierarchii ról semantycznych oraz skali pozycji strukturalnych wewnątrz frazy nominalnej. Ukazano współdziałanie pomiędzy ograniczeniami prozodycznymi i składniowymi przy wyborze morfoskładniowej realizacji argumentów zaimkowych w nominalizacjach w języku polskim.

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\*Notice that the abbreviation ROA employed in the References stands for the Rutgers Optimality Archive <<http://roa.rutgers.edu>>.

cousin'. We noticed that Polish "quasi-passive nominals" resemble Romance nominals discussed in Longobardi (2000) and Mallén (1990). The existence of "quasi-passive nominals" in English can be construed as counterevidence against the hypothesis of the parametric difference in the structure of noun phrases in English and Romance languages formulated in Longobardi (2000).

Differences between argument linking in the two types of passive nominals result from the interpolation of SingPart constraint between constraints resulting from the alignment of the Nominal Scale with the Thematic Hierarchy and the Person Scale. The restriction against first/second person object possessives in Polish "quasi-passive nominals" can be captured by means of the constraint \*Local/Patient ("Do not associate first/second person participants with the semantic role of Patient"), which is locally conjoined with the constraint \*Spec<sub>N</sub>/Patient. The apparent irrelevance of this locally conjoined constraint for "genuine passive nominals" in Polish suggests that the constraint in question is outranked (i.e. dominated by) a higher ranked constraint, i.e. the local conjunction of SingPart&\*Non-Spec<sub>N</sub>/Pronoun.

Although OT constraints are assumed to be universal, their ranking is language specific. It was postulated here that some differences observed cross-linguistically between restrictions on prenominal possessives can be modelled by assigning a distinct rank to the constraints \*Spec<sub>N</sub>/Patient, \*Local/Patient, \*Hum/Neutral, or their local conjunctions, in the languages under analysis.

Furthermore, it was shown that in some cases the OT constraints select a linearization pattern which is rejected by native speakers. It was suggested that this situation is due to restrictions on individual lexicons. For instance, while the system of syntactic OT constraints predicts that possessors denoting human nouns are most optimal in the specifier position, this linearization pattern may have no syntactic realization in Polish, if speakers avoid using denominal possessive adjectives such as *dyrektorowy* 'manager.PossAdj', cf. *?dyrektorowy syn* 'manager.PossAdj son', or *Jurkowy* 'Jurek.PossAdj', cf. *?Jurkowa żona* 'Jurek.PossAdj wife'.

In Chapter 6 it was shown how the analysis outlined in Chapter 5 can be enriched in order to allow for the influence of prosody on selecting the more desirable linearization pattern in Polish verbal nominals. A modification of the constraint ranking from Chapter 5 was proposed for careful Polish. It was assumed that in Polish verbal nominals the object-type argument which bears no discourse prominence can surface either in the pre-head or the post-head position. Syntactic constraints allow for both linearization patterns, but prosodic constraints can select one of them as more felicitous.



useful for cross-linguistic studies, we followed A i s s e n (2002) in recognizing two structural positions in noun phrases, i.e. the pre-head position labelled "Spec" (where Spec stands for the specifier of NP/DP) and the post-head position labelled "Non-Spec".

It was shown that the Nominal Scale ( $\text{Spec}_N > \text{Non-Spec}_N$ ) should be aligned with several prominence scales, including the Animacy Scale, the Definiteness Scale, the Person Scale, and the Thematic Hierarchy. This gives rise to constraints such as  $\ast\text{Spec}_N/\text{Inanimate}$ ,  $\ast\text{Non-Spec}_N/\text{Definite}$ ,  $\ast\text{Non-Spec}_N/\text{Pronoun}$ , or  $\ast\text{Spec}_N/\text{Patient}$ . Furthermore, the mechanism of the local conjunction of constraints allows us to formulate generalizations which refer to values from more than two prominence scales simultaneously (e.g. the Person Scale, the Thematic Hierarchy and the Nominal Scale), for instance the locally conjoined constraints  $\ast\text{Local}/\text{Patient} \& \ast\text{Spec}_N/\text{Patient}$ .

The above-mentioned Optimality-theoretic constraints can encode restrictions on possessors, shared by languages in which a different syntactic (i.e. phrasal or lexical) status is assigned to the pre-head elements in the noun phrase. The interaction of those constraints predicts the greater felicity of the prenominal position for nouns which are definite, pronominal, and/or have personal (or animate) reference.

Furthermore, it was illustrated (as in, among others, N u n e s 1993 and T a y l o r 1996) that the requirements of information structure exert influence on the linearization patterns both in referential and event nominals. While some linguists regard topics (in clauses or in noun phrases) as non-prominent by virtue of referring to given information, we recognize arguments in the  $\text{Spec}_N$  position as being prespecified in the input for discourse and cognitive prominence.

Whereas a number of researchers assume that the derivation of deverbal nominals involves the obligatory suppression of the external (Agent-type) arguments, it was argued here that, at least in Polish and English, the suppression of the external argument is optional. When the Agent is not suppressed, transitive nominals arise, such as the English nominal *the barbarians' destruction of the enemy*, or the Polish nominal *twoje nieudolne śpiewanie arii operowych przy goleniu* 'your inept singing of the opera arias during shaving'. When the suppression of the external argument occurs, the result may be an active nominal with no prenominal possessive, e.g. *the destruction of the city (by barbarians)*, Polish *śpiewanie arii operowych (przez mojego kuzyna)* 'the singing of opera arias (by my cousin)'. Alternatively, it may be a "quasi-passive nominal", which occurs with an objective possessive but allows for optional agentive adjuncts and rationale clauses, e.g. English *its discussion by experts*, or Polish *ich śpiewanie (przez mojego kuzyna)* 'lit. their singing by my

exhibiting the separation property. As in Trugman and Cetnarowska (2001), it was argued here that the derivation of “genuine passive nominals” in Polish involves the elimination of the external argument. Since the derivation of passive nominals is a lexical process, it is expected to show some gaps. For instance, although the verb *zamordować* ‘to murder’, appears to exhibit the separation property (by analogy to its equivalent in English, i.e. the verb *murder*), the possessive pronoun in the Polish nominal *wasze zamordowanie* or *wasze morderstwo* ‘your murder’ does not allow the object-type reading (in contrast to the English passive nominal *John’s murder*).

Polish nominals with objective possessives which belong to the so-called “quasi-passive nominals” do not correspond to predicates with the separation property. They can be related both to verbs which take affected and unaffected objects, e.g. *ich zaproszenie* ‘inviting them (lit. their inviting)’, *jej zrozumienie* ‘understanding her/it (lit. her/its understanding)’, or *jego unikanie* ‘avoiding him/it (lit. his/its avoidance)’. They do not call for the obligatory terminative interpretation, hence their event structure can contain the activity subeventuality. They were analyzed here as denoting two-argument (and two-participant) eventualities since the implicit Agent argument is syntactically active, and can license agentive adjuncts, agent-oriented modifiers and rationale clauses.

Furthermore, it was suggested that some English nominals with objective possessives, namely those containing pronominal possessives denoting unaffected objects, should be regarded as “quasi-passive nominals”, e.g. *its pursuit (by Croats)*, *its discussion (by the committee)*, *their recollection*.

It was assumed that restrictions on the occurrence of “quasi-passive nominals” in Polish and English result from the competition between alternative “active” and “passive” linearization patterns in noun phrases. A theoretical model which is particularly suitable for dealing with “conspiracies” of restrictions, and with the competition between alternative patterns, is the non-derivational framework of Optimality Theory. Thus, Chapter 5 served as an illustration of the application of the OT model in syntax.

It was shown that the use of the OT mechanism of harmonic alignment in syntax brings desirable results in predicting the most felicitous realization of Possessors in referential nouns in English and Polish. It would be possible to propose distinct generalizations for English and for Polish, to describe the mapping of the Possessor onto the synthetic genitive (‘s genitive) or the analytic genitive (*of*-genitive) in English, and onto the possessive adjective or the adnominal genitive in Slavic languages (such as Polish). Since we aimed at proposing a model which would be

## Conclusion

This dissertation investigated passive nominals, focusing on the data from English and Polish. Special attention was paid to the syntactic realization of pronominal arguments, in view of the structural or prosodic deficiency of pronouns.

It was demonstrated that passive nominals in the two languages under analysis can exhibit the event reading, apart from denoting results. The majority of English passive nominals fail some diagnostics proposed for argument-taking nominals (referred to as Complex Event Nominals in Grimshaw 1990) since their event structure contains only the achievement subeventuality. Moreover, the Agent is not syntactically active, hence such nominals are unacceptable when accompanied by rationale clauses or agent-oriented modifiers. Passive nominals with those characteristics are derived from predicates which exhibit the "separation property" (in the sense of Doron and Rappaport-Hovav 1991), since their achievement subeventuality contains only one (Patient/Theme) participant. The derivation of passive nominals, such as *the city's destruction*, involves the elimination of the external (i.e. Agent-type) argument and the lexical externalization of the internal (Patient-type) argument.

With respect to the data from Polish, it was shown that Polish passive nominals fall into two groups, labelled here as "genuine passive nominals" and "quasi-passive nominals". "Genuine passive nominals", such as *wasze uniewinnienie* 'your acquittal' or *moje aresztowanie* 'my arrest', exhibit similar syntactic and aspectual properties to English passive nominals. They have the terminative interpretation and are related to verbs which take affected objects. Such verbs can also be analyzed as

In colloquial Polish, in contrast, (37a) would be the normal choice. This is because of a difference in the ranking of syntactic constraints in the two varieties of Polish, suggested at the end of Chapter 5. The constraints  $*\text{Spec}_N/\text{Neutral}$  and  $*\text{Spec}_N/\text{Patient}$  have a relatively high rank in the grammar of colloquial Polish, therefore verbal nominals with pre-nominal possessives denoting objects (i.e. bearing the role of Patient or Neutral) are prohibited. In the course of evaluation by syntactic constraints, the candidate *ich wspominanie* 'their recollecting' would be a loser to *wspominanie ich* 'recollecting them'. The evaluation of the prosodization pattern of the syntactically ill-formed candidate by prosodic constraints would be, thus, of no importance. Phonology cannot "repair" the output of the syntactic component.

## 6.6. Summary

In this chapter we showed how the analysis proposed in the previous chapter can be modified in order to predict that the occurrence of Polish verbal nominals with the pre-head possessives depends partly on the prosodic phrasing of utterances.

It was suggested that OT prosodic constraints are able to select between two linearization patterns in noun phrases which are equally well-formed syntactically. Therefore, a modification of the constraint ranking postulated for careful Polish in Chapter 5 was proposed here. We demoted two constraints:  $*\text{Spec}_N/x$  and  $*\text{Spec}_N/\text{Neutral}$ , as shown in (31). The constraint  $*\text{Spec}_N/x$  prohibits arguments which lack discourse prominence (i.e. which are not topics) from occurring as possessives. The constraint  $*\text{Spec}_N/\text{Neutral}$  penalizes possessor noun phrases bearing the role of Neutral. A new constraint was added, labelled  $*\text{Empty Spec}_N$ , which calls for the specifier position in noun phrases to be filled by an overt element.

We allowed prosodic constraints to select between the variant of a Polish verbal nominal with the post-head pronoun and the pre-head possessive when the pronominal argument is not pre-specified in the input for discourse prominence.

It was assumed that phonological constraints do not change the result of the syntactic evaluation. They do not intermix with syntactic constraints, either.

In such a framework, it would have to be stated that both the nominals in (34) below are equally well-formed (syntactically and prosodically).

- (34) a. listy      wzywające      do jego      poparcia  
          letters   calling      to his      supporting  
       b. ??listy   wzywające      do      poparcia      go  
          letters   calling      to      supporting      him.Gen

The stylistic infelicity of (34b) in a careful variety of Polish would be treated as an extra-grammatical (i.e. a performance) phenomenon.

Pullum and Zwicky (1988) claim that there are no genuine cases of systematic phonological influence on syntactic rules. They warn against the recognition of prosodic sensitivity of particular syntactic phenomena, since this would lead, in their opinion, to an unconstrained model of grammar. According to them, such a model would allow for imaginary (and universally unattested) phonological conditions on syntactic rules, such as allowing for adverb fronting only if the adverb in question begins with a bilabial consonant.

However, the model of phonology-syntax interaction adopted here (following Golston 1995) is fairly restricted. Phonological and syntactic constraints do not intermix, in agreement with (35):

- (35) Constraint Intermixing Ban: Constraints belonging to different modules of the grammar may not intermix. (Legendre 2000: 458)

Phonological constraints can never “overrule” syntactic ones. This position agrees with the ranking of blocks of OT constraints postulated in Legendre (2000: 458):

- (36) Syntactic constraints >> Prosodic constraints >> Morpho-prosodic constraints  
       >> Morphological constraints

The prosodic pattern of (37b) is more felicitous than the prosodization of (37a), since in (35a) the unstressed pronoun *ich* ‘them.Gen’ is unparsed, and occurs at the end of the phonological phrase and the intonational phrase. As was shown in tableau (33) above, this incurs the violation of at least three prosodic constraints. Therefore, sentence (37b) would be uttered, instead of (37a), in careful Polish.

- (37) a. Nie będzie      czasu      na      wspomnianie      ich.  
          not be.Fut3SgN time.Gen      on      recollecting      them.Gen  
          ‘There will be no time for recollecting them’.  
       b. Nie będzie      czasu      na      ich      wspomnianie.  
          not be.Fut3SgN time.Gen      on      their      recollecting

the pre-pausal position, there is an additional violation of the constraint Al-R (IntP, Ft), which forces the alignment of the right edge of the Intonational Phrase and the foot.

For brevity, we will give in (32) a double tableau (cf. Legendre 2000 for similar tableaux). It compares the winning candidates which were selected during the evaluation of various prosodization patterns of two syntactic variants of a verbal nominal.

(32) Prosodic evaluation of syntactic variants *wspominanie ich* 'remembering them.Gen' and *ich wspominanie* 'their (Neutral) remembering'

|                                                                                                         | Al-R(IntP, Ft) | Al-R (PPh, Ft) | Parse $\sigma$ |
|---------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|
| a. <i>wspominanie ich</i><br>[[ $(\sigma\sigma)(\sigma\sigma)\sigma$ ] <sub>PPh</sub> ] <sub>IntP</sub> | *              | *              | *              |
| b. <i>ich wspominanie</i><br>[[ $(\sigma\sigma)\sigma(\sigma\sigma)$ ] <sub>PPh</sub> ] <sub>IntP</sub> |                |                | *              |

From the syntactic point of view, both linearization patterns are equally well-formed in careful Polish. If prosody is taken into account, the variant with the pre-head possessive is evaluated as more optimal. This is shown in the tableau below.

(33) Input: N *wspominanie* 'recollecting, mentioning' argument 1: Experiencer/implicit; argument 2: x/Neutral/3Pl

|                                                                                                         | Syntax | Phonology |
|---------------------------------------------------------------------------------------------------------|--------|-----------|
| a. <i>wspominanie ich</i><br>[[ $(\sigma\sigma)(\sigma\sigma)\sigma$ ] <sub>PPh</sub> ] <sub>IntP</sub> |        | *!        |
| b. <i>ich wspominanie</i><br>[[ $(\sigma\sigma)\sigma(\sigma\sigma)$ ] <sub>PPh</sub> ] <sub>IntP</sub> |        |           |

The analysis postulated above allows us to highlight the relationship between syntactic and prosodic constraints in the selection of the most optimal linearization pattern for Polish verbal nominals with pronominal arguments.

The capturing of a link between the prosodic environment (e.g. phrase-final position) of a verbal nominal and the position of a pronominal argument would not be possible in a model of phonology-free syntax, such as the one defended in Pullum and Zwicky (1988). Pullum and Zwicky assume that sentences such as \**He threw into the wastebasket the letter* are not preferred by speakers of English only for processing reasons.

\*Spec<sub>N</sub>/x, and assuming that it is in a tie with (i.e. it has the same rank as) \*Non-Spec<sub>N</sub>/Pronoun.

The fact that the constraints \*Spec<sub>N</sub>/x and \*Non-Spec<sub>N</sub>/Pronoun are now viewed as having equal strength is indicated by the dotted line separating the two constraints in the tableau below. The violation of \*Spec<sub>N</sub>/x is now equally costly as the violation of \*Non-Spec<sub>N</sub>/Pronoun. To avoid the lower-ranked constraint, i.e. \*Spec<sub>N</sub>/Neutral, from eliminating candidate (b) in tableau (30), the latter constraint must be demoted as well. We propose that \*Spec<sub>N</sub>/Neutral is in a tie with a constraint which requires the pre-head (i.e. specifier) position to be filled by a non-implicit argument. The new constraint will be labelled \*Empty Spec<sub>N</sub><sup>8</sup>.

(30) Input: N *wspominanie* 'recollecting, mentioning' argument 1: Experiencer/implicit; argument 2: x/Neutral/3Pl

|                             | *Spec <sub>N</sub> /x | *Non-Spec <sub>N</sub> /<br>Pronoun | *Spec <sub>N</sub> /<br>Neutral | *Empty Spec <sub>N</sub> |
|-----------------------------|-----------------------|-------------------------------------|---------------------------------|--------------------------|
| ☺ a. <i>wspominanie ich</i> |                       | *                                   |                                 | *                        |
| ☺ b. <i>ich wspominanie</i> | *                     |                                     | *                               |                          |

The revised constraint ranking<sup>9</sup> for careful Polish, which follows from the introduction of \*Empty Spec<sub>N</sub> and the demotion of \*Spec<sub>N</sub>/x and \*Spec<sub>N</sub>/Neutral, is given in (31):

(31) Revised constraint ranking (for careful Polish):

\*SingPart & \*Non-Spec<sub>N</sub>/Pronoun >> { \*Local/Neutral & \*Spec<sub>N</sub>/Neutral,  
\*Local/Patient & \*Spec<sub>N</sub>/Patient } >> { \*Spec<sub>N</sub>/x; \*Non-Spec<sub>N</sub>/Pronoun } >>  
{ \*Spec<sub>N</sub>/Neutral, \*Empty Spec<sub>N</sub> } >> { \*Non-Spec<sub>N</sub>/X, \*Spec<sub>N</sub>/Patient }

Now both candidates in tableau (30), which are well-formed syntactically, enter the evaluation by prosodic constraints. As was mentioned at the beginning of the present chapter, nominals which end in an atonic pronoun violate the prosodic constraint A1-R (PPh, Ft). It requires that the right edge of a phonological phrase should correspond to the right edge of a foot. If the nominal *wspominanie ich* 'remembering them' occurs in

<sup>8</sup> \*Empty Spec<sub>N</sub>, which is postulated here to evaluate NPs, shows similarity to SUBJ. The latter constraint is formulated by J. Grimshaw as follows: "The highest A-specifier in an extended projection must be filled" (cf. Legendre et al. 2001: 5). SUBJ penalizes clauses which lack an overt subject.

<sup>9</sup> The dominance relations between \*Empty Spec<sub>N</sub> and other constraints employed in Chapter 5 need further study. This constraint must be ranked low in colloquial Polish.

Now we will attempt to modify this analysis to incorporate the influence of prosodic factors on syntactic variation within noun phrases. We would like to say that the pre-head occurrence of object-type arguments in Polish nominals<sup>7</sup> is due either to their discourse prominence or to the requirements of prosodic phrasing.

Let us illustrate it for Polish nominals, such as *wspominanie ich* 'remembering them' and *ich wspomnianie* 'their remembering'. The constraint ranking for careful Polish given in (92) in the previous chapter is repeated below, for convenience, as (27), while in (28) and (29) we give the constraint evaluation for the two linearization patterns of this nominal:

(27) The ranking of selected constraints in careful Polish:

SingPart & \*Non-Spec<sub>N</sub>/Pronoun >> { \*Local/Neutral & \*Spec<sub>N</sub>/Neutral;  
 \*Local/Patient & \*Spec<sub>N</sub>/Patient } >> \*Spec<sub>N</sub>/x >> \*Non-Spec<sub>N</sub>/Pronoun >>  
 \*Spec<sub>N</sub>/Neutral >> { \*Non-Spec<sub>N</sub>/X, \*Spec<sub>N</sub>/Patient }

(28) Input: N *wspominanie* 'recollecting, mentioning' argument 1: Experiencer/implicit; argument 2: X/Neutral/3Pl

|                             | *Spec <sub>N</sub> /x | *Non-Spec <sub>N</sub> /<br>Pronoun | *Spec <sub>N</sub> /<br>Neutral | *Non-Spec <sub>N</sub> /X |
|-----------------------------|-----------------------|-------------------------------------|---------------------------------|---------------------------|
| a. <i>wspominanie ich</i>   |                       | *!                                  |                                 | *                         |
| ☺ b. <i>ich wspomnianie</i> |                       |                                     | *                               |                           |

(29) Input: N *wspominanie* 'recollecting, mentioning' argument 1: Experiencer/implicit; argument 2: x/Neutral/3Pl

|                             | *Spec <sub>N</sub> /x | *Non-Spec <sub>N</sub> /<br>Pronoun | *Spec <sub>N</sub> /<br>Neutral | *Non-Spec <sub>N</sub> /X |
|-----------------------------|-----------------------|-------------------------------------|---------------------------------|---------------------------|
| ☺ a. <i>wspominanie ich</i> |                       | *                                   |                                 |                           |
| b. <i>ich wspomnianie</i>   | *!                    |                                     | *                               |                           |

We would like to change the constraint ranking in (27) to allow both candidates in tableau (29) to be equally well-formed syntactically (i.e. in the cases when the object-type argument does not function as a topic). This can be done, for instance, by demoting the constraint labelled

<sup>7</sup> We do not postulate the same modification for English nominals. Prosodic constraints which penalize the occurrence of unparsed syllables at the end of the Intonational Phrase or Phonological Phrase cannot ban such English noun phrases as *the avoidance of them* or *the recollection of it* (in formal or colloquial English). In English "quasi-passive nominals" only those object-type arguments which are pre-specified for discourse prominence can occur in the Specifier position.



course of constraint evaluation, in spite of violating some phonological constraints, since the rival candidate in (25b) is eliminated by syntactic constraints.

## 6.5. Constraint interaction in Polish “quasi-passive nominals”

In the section below it will be shown how prosodic constraints can be used to select between two linearization patterns in Polish “quasi-passive” verbal nominals.

If we follow the insights from the analysis of the Heavy NP Shift in English, developed in Golston (1995), we need to relax the syntactic constraints postulated in the previous chapter, in order to allow prosodic constraints to choose between two candidates which are equally well-formed syntactically.

In Chapter 5 it was proposed that discourse factors (such as the topic-status of the pronominal argument) determine the syntactic realization of this argument as the pronominal possessive in “quasi-passive” Polish and English nominals. It was assumed that pronominal arguments which are pre-specified in the input as having high discourse prominence (i.e. pre-specified as topics) obligatorily surface in the pronominal position, e.g. *its pursuit*, *jej zrozumienie* ‘its/her understanding’. This is confirmed by the sentences in (26):

- (26) a. Jeśli chodzi o zbiory polskiego malarstwa współczesnego, to ich eksponowanie za granicą przynosi niewielkie zyski. ‘As far as the collection of Polish modern paintings is concerned, exhibiting it abroad (lit. their exhibiting abroad) brings small profits’.
- b. Jeśli chodzi o nauczyciela języka włoskiego, to jego znalezienie nie będzie łatwe. ‘As far as (the/a) teacher of Italian is concerned, finding him (lit. his finding) will not be easy’.

When they do not function as topics (and are pre-specified as being non-prominent), pronominal arguments are predicted to appear in the post-head position in the analysis proposed in Chapter 5, e.g. *znalezienie go* ‘finding him’, *zrozumienie jej* ‘the understanding of it/her’. Such results follow from a high rank of  $*\text{Spec}_N/x$  (which penalizes non-prominent elements in the pre-head position) and  $*\text{Non-Spec}_N/X$  (which prohibits discourse prominent elements from following the head).

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